(31,800)

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1926

No. 325

THE TEMCO ELECTRIC MOTOR COMPANY, PETITIONER,

vs.

APCO MANUFACTURING COMPANY

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS, FIFTH CIRCUIT

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[fol. 1]

IN UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF GEORGIA, NORTHERN DIVISION

In Equity

THE TEMCO ELECTRIC MOTOR COMPANY, Plaintiff,

versus

APCO MANUFACTURING COMPANY, Respondent

On Thompson Patent 1,072,791

BILL OF COMPLAINT—Filed January 30, 1924

To the Judges of the District Court of the United States for the Northern District of Georgia, Northern Division:

The Temco Electric Motor Company, a corporation organized and existing under the laws of the State of Ohio, with its principal office and factory in the City of Leipsic, County of Putnam and State of Ohio, and an inhabitant of said State, brings this, its bill of complaint, against the Apco Manufacturing Company, a corporation organized and existing under the laws of the State of Rhode Island, with its principal place of business in the City of Provi-[fol. 2] dence, and State of Rhode Island; and an inhabitant of said State, and having a regular and established place of business and having committed acts of infringement in the City of Atlanta, County of Fulton, and State of Georgia, within the jurisdiction of this Court.

And thereupon your orator, complaining, says:

(1) Your orator shows that Ralph P. Thompson and William S. Thompson, before and at the time of their application for the hereinafter mentioned letters patent, were citizens of the United States, and were the true, original, first and joint inventors of certain new and useful improvements in Automobiles, consisting of a spring suspension device or shock absorber, fully described in the specification of

letters Patent No. 1,072,791, dated September 9th, 1913, and which were not known or used by others in this country before their invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, or more than two years prior to their application, and not in public use or on sale in this country for more than two years prior to their application, were not abandoned and were not first patented in any foreign country on an application filed more than twelve months before their said application in the United States.

(2) Your orator further shows that on the 7th day of December, 1912, by an instrument in writing, duly executed and delivered, the said Ralph P. Thompson and William S. Thompson did assign and convey to Oliver P. Edwards, for a valuable consideration, one-third of all their right, title and interest in and to the said invention, and in and to [fol. 3] the letters patent to issue thereon, and authorized and requested the Commissioner of Patents to issue said letters patent to Ralph P. Thompson, William S. Thompson and Oliver P. Edwards, which said instrument was also duly recorded in the Patent Office of the United States on the 9th day of December, 1912, in Liber T, 90, page 402, of Transfers of Patents, whereby Ralph P. Thompson, William S. Thompson and Oliver P. Edwards became the sole and exclusive owners of said letters patent, as will more fully and at large appear by said assignment, or a certified copy thereof, in Court to be produced.

(3) Your orator further shows that on the 9th day of September, 1913, after a full compliance by said Ralph P. Thompson and William S. Thompson, with all requirements of law in such cases made and provided, and the payment of the necessary fees into the Treasury of the United States, and after due examination having been made by the Commissioner of Patents into the novelty and utility of said invention, said letters patent No. 1,072,791 were, on the application of said Ralph P. Thompson and William S. Thompson, assignors, issued and delivered to Ralph P. Thompson, William S. Thompson and Oliver P. Edwards, in the name of the United States of America, in accordance with the laws of the United States, and under the Seal of

the Patent Office of the United States, and were signed by the Commissioner of Patents of the United States; and that the letters patent No. 1,072,791 did grant to them, their heirs and assigns, for the term of seventeen years from that date, the exclusive right to make, use and vend the said invention throughout the United States and the Territories thereof, as will more fully and at large appear by said letters patent, or a certified copy thereof, in Court to be produced.

[fol. 4] (4) Your orator further shows that on the 18th day of March, 1914, by an instrument in writing, duly executed and delivered to it, the said Ralph T. Thompson, William S. Thompson and Oliver P. Edwards, did assign and convey to your orator, its assigns and legal representatives, for a valuable consideration, all the right, title and interest in and to said invention, and in and to said letters patent No. 1,072,791, and in and to all and every right of action at law and in equity theretofore accrued by reason of any and all infringement of said letters patent, together with the right to sue therefor, and to possess and have any and all recovery growing out of such infringement, which said instrument was also duly recorded in the Patent Office of the United States on the 26th day of March, 1914, in Liber O 94, page 263, of Transfers of Patents, whereby your orator became, and now is, the sole and exclusive owner of said letters patent, and has so been since the date of said assignment, as will more fully and at large appear by said assignment, or a certified copy thereof, in Court to be produced.

(5) Your orator further shows that said letters patent No. 1,072,791, sued on herein, were held by Judge Clarke to be good and valid and to be infringed by respondents in the suit of this plaintiff against the K. W. Ignition Co. and J. A. Williams, in the United States District Court for the Northern District of Ohio, Eastern Division, at Cleveland, Ohio; that said respondents, the K. W. Ignition Co. and J. A. Williams, took an appeal to the United States Circuit Court of Appeals for the Sixth Circuit, Judges Warrington, Knappen and Sater sitting, and said Court of Appeals affirmed Judge Clarke in holding said letters patent good and valid and in finding infringement. (243 F. 588.)

[fol. 5] (6) Your orator further shows that said case of this plaintiff against said The K. W. Ignition Co. and J. A. Williams was referred to a Master to take an accounting and on the appeal to said Court of Appeals, Judges Knappen, Denison and Donahue sitting, it re-dered a decision resulting in a judgment of $292,938.26 against said respondent; that after said decision by the Court of Appeals, the respondents filed a petition for a writ of certiorari, which the Supreme Court of the United States denied (260 U. S. 746); and that after said denial by the Supreme Court said respondents paid said sum of $292,938.26 to said plaintiff.

(7) Your orator further shows that said letters patent No. 1,072,791, sued on herein, were held by Judge Killits to be good and valid and to be infringed by respondents in the suit of this plaintiff against Halladay and Browne, in the United States District Court for the Northern District of Ohio, Western Division, at Toledo, Ohio; and that said respondents settled for their past infringement by paying plaintiff the sum of $30,000 and by agreeing not to infringe in the future.

(8) Your orator further shows that said letters patent No. 1,072,791, sued on herein, were found by Judge Westenhaver to be good and valid and to be infringed by respondents in the suit of this plaintiff against The Forest City Electric Co. et al., in the United States District Court for the Northern District of Ohio, Eastern Division, at Cleveland, Ohio.

(9) Your orator further shows that said letters patent No. 1,072,791, sued on herein, were found by Judge Westenhaver to be good and valid and to be infringed by respondent in the suit of this plaintiff against The Pennsylvania [fol. 6] Rubber & Supply Company, in the United States District Court for the Northern District of Ohio, Western Division, at Toledo, Ohio; that the shock absorbers involved in said suit against The Pennsylvania Rubber & Supply Co. were manufactured by the Apco Manufacturing Company, of Providence, Rhode Island, the respondent herein; and that the Apco shock absorbers made and sold by the respondent, Apco Manufacturing Company, and complained of herein, are identical in construction, mode of operation and result with the Apco shock absorbers sold by said The

Pennsylvania Rubber & Supply Company, which shock absorbers Judge Westenhaver, in said suit against The Pennsylvania Rubber & Supply Company, held to infringe the patent sued on herein.

(10) Your orator further shows that the respondent, the Apco Manufacturing Company, has a regular and established place of business at Atlanta, Fulton County, Georgia, within the jurisdiction of this Court, where it has sold, and is now selling, Apco shock absorbers in infringement of said letters patent No. 1,072,791.

(11) Your orator further shows that the respondent within the period of six years next preceding the filing of this bill of complaint, and during and within the term of seventeen years mentioned in said letters patent, and since the date of the assignment to your orator, unlawfully, wrongfully and injuriously, and with intent to derive profits therefrom, and to deprive your orator of its profits and gains derived from its manufacture, use and sale of said patented improvements in automobiles, and against the will of your orator, did make, use and sell, and did cause to be made, used and sold, and is now making, using and selling in many of the states of the Union, and particularly [fol. 7] in the Northern District of Georgia, Northern Division, within the jurisdiction of this Court, sundry spring suspension devices or shock absorbers, and particularly those known as "Apco" shock absorbers, embodying therein the inventions set forth and claimed in said letters patent No. 1,072,791, in violation of said exclusive rights secured to your orator, but how many of such infringing devices respondent so made, used and sold, and is now making, using and selling, your orator is ignorant and cannot set forth; but your orator avers, on information and belief, that the number thereof is large, and that respondent derived and is now deriving large profits therefrom, and will continue so to do, but to what extent your orator is ignorant and cannot set forth; and your orator has thus incurred and is now incurring large damages thereby.

(12) Your orator further shows that it is a manufacturing concern, engaged on a large scale in the manufacture and sale of the improvements in automobiles under the aforesaid letters patent, and that it has manufactured and

sold large numbers of said apparatus, which have been marked with the word "Patented", together with the date and year the patent was granted, as required by law; that it has notified said respondent of its infringement of the letters patent aforesaid, but notwithstanding such notice said respondent has continued to infringe said letters patent; that your orator has invested and expended large sums of money, and has been to great trouble and expense in and about said invention, for the purpose of introducing the same and making the same profitable to itself and the public; that the device employing and containing the said invention patented as aforesaid has proved to be of great com- [fol. 8] mercial value and practical utility, has been and is in great demand, and is of great benefit and advantage to your orator and the public; and that the public has generally acknowledged and acquiesced in the rights of your orator with respect to said invention and letters patent, and left your orator in exclusive use and enjoyment thereof, save as complained of herein and in a few other instances; and as an aggravation of these acts of infringement by the respondent, it has fraudulently and unlawfully made and sold its infringing spring suspension devices or shock absorbers in simulation of the physical make-up, arrangement of parts, size of the device, size of the corresponding parts, the color of the painting, and the general appearance of your orator's said patent spring suspension device; has also plagiarized the language, arrangement of subject-matter, and ideas set forth and used in the instruction sheets of your orator, which describe the method of operation, attachment, and application of the plaintiff's device, whereby the public has been, and is being deceived, and will continue to be deceived, and your orator injured; and has further wilfully cut prices to your orator's injury.

(13) Your orator further avers that the respondent, by fraudulently and unlawfully simulating the appearance of your orator's device, and its literature and advertising matter, has heretofore diverted, and is increasingly diverting your orator's trade, injuring its business, misleading its customers and inducing the trade generally to largely deal with respondent under the belief that in purchasing its simulating devices the trade is obtaining the devices of your orator; and all to the irreparable loss and damage to

your orator; and all in aggravation of the aforesaid infringement of your orator's said patent.

[fol. 9] (14) Your orator further shows that it fears and has reason to fear, that unless the respondent is restrained by a writ of injunction, issuing out of this Court, it will continue in the aforesaid unlawful acts, and will thereby cause irreparable injury to your orator's aforesaid exclusive rights.

(15) Your orator, therefore, prays your Honors to grant a preliminary and a permanent writ of injunction, issuing out of and under the Seal of this Honorable Court, directed to the Apco Manufacturing Company, the respondent herein, strictly enjoining the said respondent, its clerks, agents, workmen and attorneys, and each and everyone of them, from making, using and selling, or from causing to be made, used and sold, any spring suspension devices or shock absorbers containing or employing the invention, or any part thereof, embraced in and covered by said letters patent No. 1,072,791; from continuing to simulate your orator's said spring suspension devices, and from continuing to plagiarize your orator's trade printed matter.

(16) Your orator further prays that the respondent be compelled to account for the profits and gains received by it by reason of said infringing, simulating and plagiarizing acts, and be decreed to pay over the same to your orator; and be decreed also to pay to your orator the damages your orator has sustained and may hereafter sustain, by reason of said unlawful acts; and because of the deliberate and wilful acts of the respondent, your orator further prays that the damages so to be assessed be increased threefold and that the respondent be decreed to pay over to your orator such increased damages; and further, that the Court decree that all improvements in automobiles or spring suspension devices or shock absorbers, made in accordance [fol. 10] with your orator's said patented invention, be delivered to your orator for destruction; and that your orator have such further and other relief including the payment of the costs of your orator, as in equity and in good conscience your orator may be entitled to.

(17) To the end, therefore, that the respondent may, if it can, show why your orator should not have the relief prayed

for, and that it make a full disclosure and discovery of all the matters aforesaid, to the best and utmost of its knowledge, remembrance, information and belief, your orator prays that respondent be compelled full, true, direct and perfect answer to make (but not under oath, which is hereby expressly waived) to the several allegations of this bill, as though specifically interrogated relatively thereto.

(18) May it please your Honors to grant unto your orator not only a writ of injunction conformable to the prayers of this bill, but also a writ of subpœna of the United States of America, directed to said the Apco Manufacturing Company, commanding it to appear and answer unto this bill of complaint (answer under oath being waived as aforesaid) and to abide by and perform such order and decree in the premises as to the Court shall seem meet and be required by the statutes and by the principles of equity and good conscience, and your orator will ever pray.

The Temco Electric Motor Co., by O. P. Edwards, President. H. A. Toulmin, H. A. Toulmin, Jr., Solicitors and of Counsel for Plaintiff.

[fol. 11] *Duly sworn to by O. P. Edwards. Jurat omitted in printing.*

IN UNITED STATES DISTRICT COURT

ANSWER—Filed March 22, 1924

The Answer of the Apco Manufacturing Company to the Bill of Complaint Herein

This defendant, now and at all times hereafter, saving and reserving to itself all and all manner of benefit and advantage by exception or otherwise that can or may be had or taken to the manifold errors, uncertainties, imperfections and insufficiencies in said bill of complaint contained, for answer thereto, or unto so much and such parts thereof as it is advised and is material for it to make answer unto, answers and says:

[fol. 12] 1. Defendant admits the plaintiff company is an Ohio corporation and the defendant a Rhode Island Cor-

poration and that defendant has a place of business in the City of Atlanta, Georgia, but denies it ever committed any acts of infringement within said district or elsewhere.

2. Defendant admits that Patent No. 1,072,791 was issued, but whether it was procured according to law, is left to plaintiff to prove.

3. Defendant denies that before and at the time of the application for said patent No. 1,072,791 or at any other time Ralph P. Thompson and William S. Thompson were the true, original and first inventors of the alleged improvements referred to; denies that they made due and proper application for letters patent; and denies that proper proceedings were had by reason of which there was secured to said Thompson and Thompson and their assigns an exclusive right to manufacture, use or sell the alleged improvements.

4. Defendant is not advised, save by the bill of complaint, whether the plaintiff is vested with any title whatsoever in and to the said alleged Patent No. 1,072,791 and leaves plaintiff to such proof of its title as may be advised.

5. Defendant admits the allegations of paragraphs (5) and (6) of the bill of complaint but avers that said suit against the K. W. Ignition Company and Joseph A. Williams, in so far as concerns the patent issues therein as distinguished from the issue of unfair competition and of estoppel growing out of the contractual and fiduciary relationship between the plaintiff and the defendants therein, was not fully, adequately or properly defended, that the de- [fol. 13] fendants therein failed to introduce in evidence or submit to the Court and the plaintiff therein suppressed from the record and the Court facts and evidence negativing validity of the patent in suit and necessary to a complete record and a correct and proper determination of said patent issues involved therein; that defendant was not and is not in any way, directly or indirectly, a party to said cause or decrees nor directly or indirectly interested therein and that the said decrees and the records or any act or finding or thing in said suit are not binding upon this defendant.

6. Answering paragraph (7) of the bill of complaint, defendant admits said suit was brought and that a decree was

entered in said suit, but defendant denies that the defendants Halladay and Browne paid Plaintiff $30,000 or any other amount for their alleged past and present infringement, and defendant avers that said case was not defended and not contested and that a default decree was entered therein and that proceedings between plaintiff and the said defendant Halladay are still pending in said cause in said Court, wherein Halladay denies jurisdiction of the Court in said cause. Defendant avers it was not and never has been a party to said suit or decree between plaintiff and Halladay and Browne, that it has no interest in said suit or decree directly or indirectly, is not connected with either of the said defendants Halladay and Browne directly or indirectly and that said default decree or any other decree which may have been entered in said cause is not binding directly or indirectly upon this defendant.

7. Answering paragraph (8) of the bill of complaint, defendant admits that said suit was brought against the Forest City Electric Company, but avers that one Le Roy [fol. 14] Westman was a defendant jointly to said suit and was an agent of the defendants in the K. W. Ignition suit mentioned in paragraphs (5) and (6) of the bill of complaint, that the defendants Forest City Electric Company and Le Roy Westman failed to set up or introduce in evidence or submit to the Court and plaintiff suppressed from the Court the true facts and the Court was, therefore, without facts and evidence necessary to a correct and proper determination of the issues relating to the patent in suit; that because of financial embarrassment and the condition of bankruptcy and receivership of the defendant company Forest City Electric Company, the defendants therein were unable to fully, completely and properly defend the suit and that because of said conditions the decree entered therein was largely by default and inability on the part of the defendants to properly defend the said suit and that no appeal from said decree was even taken or perfected to the Court of Appeals, and that said decree is not binding directly or indirectly upon this defendant nor has this defendant at any time directly or indirectly been a party to said suit or interested in said suit or decree in any manner whatsoever.

8. Answering paragraph (9) of the bill of complaint defendant admits a suit was brought by this plaintiff against the Pennsylvania Rubber & Supply Company at Cleveland, Ohio, and that a decree was entered therein against the defendant Pennsylvania Rubber & Supply Company, but defendant avers said suit was not defended and the said decree was entered by default, that said suit was brought against the defendant herein and that the Court on motion of the defendant herein quashed the service of process and [fol. 15] dismissed the defendant from the Court, that this defendant is not and never has been a party to said decree or suit nor interested directly or indirectly therein, that it did not defend nor seek to defend said suit or said defendant directly or indirectly and that said default decree is not binding upon this defendant in any manner whatsoever. Defendant admits that the alleged infringing Apco shock absorbers sold by the Pennsylvania Rubber & Supply Company were manufactured by this defendant and are the same as the shock absorbers defendant herein has been manufacturing and selling under the terms of the Storrie Patent hereinafter mentioned and which plaintiff alleges herein as infringements of the patent in suit.

9. Defendant admits it has a place of business at Atlanta, Georgia, Fulton County, within the jurisdiction of this Court, but denies it has ever there or elsewhere sold shock absorbers in infringement of the alleged patent in suit.

10. Defendant denies each and all of the allegations in paragraph (11) of the bill of complaint, Defendant, further answering the bill of complaint denies that at any time it has unlawfully or otherwise manufactured, sold or used any device in infringement of the alleged patent in suit, and denies that it has gained any profits of any character therefrom, as alleged in the bill of complaint and denies that it has ever received from plaintiff any notice of its alleged patent or any notice of claim of infringement of said alleged patent or had any knowledge of said alleged patent prior to notice of a suit at Toledo against this defendant which, as set out in paragraph 8 of the answer herein, was dismissed by the Court, and denies that it has ever violated any alleged rights of the plaintiff whatsoever.

[fol. 16] 11. Referring to paragraph (12) of the bill of complaint defendant denies that plaintiff has suffered any such damage and injury or loss of profits and gains as stated therein. Defendant further avers that such loss of said profits and gains was impossible for the reason that plaintiff abandoned and stopped manufacture of any device under the alleged patent sued on and abandoned the alleged invention of said alleged patent sued on and that said plaintiff or others has or have not manufactured, used or sold any devices alleged to be made or made under the said alleged patent for the past eight years continuously. Defendant denies also that plaintiff has suffered any injury damage or loss of profits and gains or suffered irreparable or other damage or loss or injury of any kind whatsoever by any action of defendant in any way whatsoever.

12. Defendant further answering, denies all of the allegations of paragraphs (12) and (13) of the bill of complaint.

13. Further answering the bill of complaint defendant denies the plaintiff should have any such relief as asked for or any relief whatsoever as there is no ground or cause for its complaint.

14. Defendant further answering the bill of complaint, avers that its shock absorber as manufactured by it is a substantial copy of the shock absorber described and claimed in letters patent No. 1,279,035, issued September 17, 1918, after interference proceedings with an application of Ralph P. Thompson and assigned by said Thompson to the plaintiff herein; that the claims of the said Thompson application in interference were for combinations of elements [fol. 17] which the defendant admits are found in the shock absorber of defendant alleged to infringe the alleged patent sued on; that when said Thompson and his plaintiff were seeking a patent from the Commissioner of Patents on said Thompson application, the Commissioner of Patents cited against the said claims of the said Thompson application the alleged patent in suit herein and that with the expectation and the desire of the plaintiff herein that the Commissioner of Patents would grant a patent or issue letters patent on said application to Thompson and without knowledge on the part of this plaintiff or the applicant Thompson that said William Storrie has filed application for his

said letters patent, said plaintiff and Thompson advised and informed the Commissioner of Patents that the alleged patent sued on herein was and is different in mechanical construction and functional results from the shock absorber described and claimed in the said Thompson application, that in view of said representation to the Commissioner of Patents the said Commissioner of Patents allowed the claims to Thompson for the purpose of publication by letters patent, that directly thereafter an interference on said claims was declared by the Commissioner of Patents between the said applications of Thompson and Storrie, that proceedings before the Patent Office and the Court of Appeals of the District of Columbia, that all the tribunals of the Patent Office and the Court of Appeals of the District of Columbia awarded priority of invention to the said William Storrie, that as a result of the said judgments or decrees or awards in the said interference proceedings, the said Storrie Patent was issued to William Storrie containing the claims of the said Thompson interfering application and constituting the issues of the interference proceedings; that the absorber of the said interfering Thomp-[fol. 18] son application and the absorber of the Storrie patent aforesaid are the same in construction and functional results; and that plaintiff is estopped to assert or claim or allege that the said Apco shock absorber is the same in mechanical construction and functional results as the shock absorber of the alleged patent in suit, all of which matters and things this defendant begs leave to submit to the Court as is necessary and proper and as it shall be advised.

15. Defendant avers that the alleged inprovements referred to in the alleged patent in suit are inoperative or refer to an inoperative form of shock absorber and that the patent is, therefore, invalid.

16. Defendant avers that the alleged shock absorber of the alleged patent in suit is such that when used on a Ford car the said absorber is struck by the supporting rods of the mud guards or fenders of the car; that on account of extreme friction of the parts the absorber does not function properly and results in undue strain being placed upon the leaf spring of the Ford car and the breakage of said springs thereby.

17. Defendant avers that the alleged improvements referred to in the alleged patent in suit exhibit nothing more than the work of a mechanic; that they do not constitute an invention but only mechanical expedient and well known mechanical adaptions but in a very poor and defective form; that they do not produce any new or improved or useful effects; and that the claims of the alleged patent in suit are for mere aggregations of old and well known devices in the art.

[fol. 19] 18. Defendant avers that the alleged patent in suit is null and void and is a fraud upon this defendant and the public because the alleged improvements embraced therein or the material and substantial parts thereof had been, prior to the alleged inventions thereof by said Thompson and Thompson made known and published and described and illustrated in numerous prior patents as follows and in numerous other prior patents and publications which as yet have not been revealed to this defendant but which this defendant begs leave to add to this answer by proper amendment when the same have been found:

British Patent

Bussing, February 11th, 1907, No. 3385.

French Patents

Peugeot, December 23rd, 1910, No. 418,991.
Cosset, March 27th, 1912, No. 441,832.

19. Defendant avers that each and every and all material parts of its shock absorber are found in each and all of the aforesaid letters patent; defendant further avers that in an answer filed by the plaintiff herein to a bill of complaint of suit in equity No. 225 in the District Court of the United States for the Northern District of Ohio, Western Division, entitled The K. W. Ignition Company vs. The Temco Electric Motor Company, et al., the plaintiff herein admitted, alleged and averred in effect that the defendant's absorber alleged to infringe the alleged patent sued on herein, was anticipated by the said letters patent to Cosset of March 27th, 1912, No. 441,832.

[fol. 20] All of which matters and things this defendant is willing to aver, maintain and prove, as this Honorable Court shall direct, and prays to be hence dismissed, with its reasonable costs and charges in this behalf most wrongfully sustained.

For counterclaim this defendant alleges on information and belief, that the plaintiff herein without just cause and with the preconceived intent to injure this defendant and destroy its business and reputation, did deliberately, wilfully and unlawfully publish to the public and the trade and the customers of this defendant by printed word and otherwise, certain untrue, false and misleading statements to the effect that a decree of the District Court of the United States at Toledo, Ohio, had been entered against this defendant for the infringement of the said letters patent in this suit and that a decree had been entered against the Pennsylvania Rubber & Supply Company, a customer of this defendant, for infringement of the alleged patent in this suit, at the same time representing that said decree was only entered after a full, complete and proper defense of the suit and not by default of the defendant Pennsylvania Rubber & Supply Company to contest and defend against said suit. Wherefore, this defendant has been irreparably injured and damaged and avers that because of such acts on the part of the plaintiff, the plaintiff is guilty of unclean hands and not entitled herein to equity nor to have its prayer heard or its bill sustained in any particular or way whatsoever in this Court of Equity.

20. This defendant, therefore, prays your Honor to restrain by injunction issuing out of and under the seal of this honorable Court and directed to the Tem-o Electric Motor Company, the plaintiff herein, and its clerks agents, [fol. 21] workmen and attorneys and each and every one of them, every and any act of the plaintiff or its said agents, continuing to represent or publish to the trade or purchaser or customers of the defendant any statement or publication by printed work or otherwise, to the effect that the plaintiff has obtained a decree against any agent or customer of this defendant after any contest of the merits in any suit involving said letters patent in suit herein or has

obtained any decree of any kind whatsoever against this defendant.

Dated March 20th, 1924.

Apco Manufacturing Company. Branch & Howard, Anderson, Rountree & Crenshaw, Moseley Arthur Keller, Sols. for the Defendant. James A. Branch, Clifford L. Anderson, Moseley Arthur Keller, Counsel.

[fol. 22] In United States District Court

[Title omitted]

Atlanta, Ga., Sept. 29th, 1924.

Before Hon. Samuel H. Sibley, United States District Judge

Statement of Evidence—Filed Dec. 29, 1924

Appearances of Counsel

H. A. Toulmin, Sr., H. A. Toulmin, Jr., of Dayton, Ohio; Messrs. Troutman & Troutman, and John A. Sibley, of Atlanta, Ga., for the complainant.

Mr. Mosely, Arthur Keller, of New York, N. Y.; Branch and Howard, and Anderson, Rountree & Crenshaw, of Atlanta, Ga., for the respondent.

Offers in Evidence

The plaintiff offered in evidence all the plaintiff's affidavits and exhibits attached thereto submitted to the Court in connection with the motion for preliminary injunction, pursuant to a stipulation entered into between counsel August 26th, 1924 at Providence, R. I.

The plaintiff also offered in evidence the physical K.-W. shock absorber as plaintiff's Exhibit 21x.

Also the sample of the K.-W. absorber as manufactured by the Temco and sold by the K.-W. Company being of the type with outside shell as Plaintiff's Exhibit No. 22x.

Also the sample with the shell cut away so that the interior of the Temco absorber, to be known as Plaintiff's Exhibit No. 20x.

[fol. 23] Plaintiff also offered in evidence the deposition of Mr. O. P. Edwards taken at Dayton, Ohio, and the exhibits produced by Mr. Edwards at that time on behalf of the plaintiff, being plaintiff's Exhibit 19, comprised of certain letters, also plaintiff's exhibit 20 comprising certain testimonial letters.

Plaintiff also offered in evidence a certified copy of the file wrapper of Storrie patent 1,279,035 as plaintiff's Exhibit No. 21. Plaintiff also offered in evidence certified copy of an order authorizing a receiver and compromise of the claim of Temco Electric Motor Company in the matter of Forest City Machine & Bridge Company, as Plaintiff's Exhibit No. 22.

Plaintiff also offered in evidence a certified copy of an entry in connection with the receivership of Forest City Company, to be known as Plaintiff's Exhibit No. 23.

Plaintiff also offered in evidence the certified copy of the application for the receiver in connection with Forest City Company, to be known as plaintiff's Exhibit No. 24.

Plaintiff also offered in evidence certified copy of different entries in the case of Temco Electric Motor Company, against the Forest City Company to be known as Plaintiff's Exhibit No. 25.

Plaintiff also offered in evidence certified copy of Gamm and Nelson patent No. 1,116,878, as plaintiff's Exhibit No. 26.

Plaintiff offered in evidence as one exhibit copy of the pleadings and depositions and exhibits in the injunction in [fol. 24] this same Halladay case, to be known as Plaintiff's Exhibit No. 29.

Plaintiff offered in evidence certified copy of the record in the case of Temco Electric Motor Company vs. Pennsylvania Rubber & Supply Company as Plaintiff's Exhibit No. 30. Plaintiff called the Court's attention to the fact that the reporter entitled this as against the Apco Company, but the Apco Company was dismissed from that suit, and it involves the Apco Company no longer. Plaintiff stated to the Court that the mistake was due to the fault of the reporter in copying it and the Court stated that the ex-

hibit should go in with the statement that it was copied under the wrong name and that the paper should have been entitled to show that the defendant was the Pennsylvania Rubber & Supply Company and not the Apco Manufacturing Company.

Plaintiff also offered in evidence certified copy of the decree in the case of Temco Electric Motor Company vs. Forest City Company, to be known as Plaintiff's Exhibit No. 31.

Plaintiff also offered in evidence certified copy of decree in the case of Temco Electric Motor Company against I. J. Cooper Company, to be known as Plaintiff's Exhibit No. 32.

Plaintiff also offered in evidence plaintiff's Exhibit No. 33.

[fol. 25] Plaintiff then called as a witness Mr. T. R. Edwards, who testified, on direct examination by Mr. Toulmin, Jr., as follows:

That he resided at Leipsic, Ohio, and was a salesman for the Edwards Brothers Company.

That he made an investigation of the Temco Electric Motor Company's files to ascertain whether or not any letters in connection with the dealings of that company with customers could be had as to the satisfaction of those customers, or dissatisfaction with the Temco shock absorbers, and found quite a number of letters as time would permit; that he had a two days in which to get them. That the letters were selected from the files of the Temco Electric Motor Company by himself and these files were kept in the regular order of business as the years go along.

Plaintiff offered in evidence said letters as Plaintiff's Exhibit No. 34.

Cross-examination.

By Mr. Keller:

The witness said that all the letters offered in evidence were testimonial letters relating to the Temco absorbers and that the Temco Company received very few letters of complaint. That said letters of complaint were not pro-

duced; he was then asked the following questions and made the following answers:

Q. You just wanted to introduce the testimonial letters.
A. They are in the large majority.
Q. Were you asked to produce just testimonial letters? [fol. 26] A. I went through the files to get testimonial letters.
Q. You weren't asked to produce letters in criticism of the absorbers, were you?
A. No, sir.
Q. Just asked to produce testimonial letters by your counsel.
A. Yes.

Redirect examination.

By Mr. Toulmin:

Witness stated that very few letters of criticism were found, that he would hesitate to make a percentage of criticism of testimonial but that it would be very small. He then asked the following question and made the following answer:

Q. That is the best you can state?
A. Yes, that is the best of my knowledge.

Recross examination.

By Mr. Keller:

The witness states that all the letters were kept, he was unable to say over what period of time, but that they probably would be all available for the past 2 or 3 years anyhow, that he imagined he could find some from a period earlier than that but he could not tell how far back. That he made the search himself personally, that he is not and was at no time an officer of the Company, that he is related to the Messrs. T. C. and O. P. Edwards of the Plaintiff Company but not a brother. He stated that his duties were [fol. 27] various, that he had no position but was just connected with the sales in the office and had been in the past year.

Defendant's Proofs

The defendant inquired whether the introduction to the deposition of O. P. Edwards by plaintiff carried with it cross-examination which constituted the major portion of the deposition and was advised by plaintiff's counsel, Mr. Toulmin, that the whole deposition was in evidence.

Offers in Evidence

Defendant offered in evidence a certified copy of pages 186, 187 and 188 of the original transcript to the record in the case, The Temco Electric Motor Company vs. the K. W. Ignition Company and J. A. Williams.

Defendant also offered in evidence the advertisement as defendant's Exhibit 39.

Defendant also offered in evidence a one page advertisement of the Plaintiff Company as defendant's Exhibit 40.

Defendant also offered in evidence advertisement of the plaintiff Company in "Horseless Age" of April 15, 1917, as defendant's Exhibit No. 41.

Defendant also offered in evidence an advertisement of the plaintiff Company in the Saturday Evening Post of April 24th, 1915. This exhibit is found reproduced in part as defendant's Exhibit No. 10, in the offer in connection with the preliminary injunction case. It was offered in full at the trial as defendant's Exhibit 42.

[fol. 28] Defendant offered in evidence another advertisement appearing in "Automobile Trade Journal" as defendant's Exhibit No. 43; also advertisement of the plaintiff company in "Horseless Age" as defendant's exhibit No. 44.

Defendant then offered to make as an exhibit a circular known as Exhibit *J* in the case of the Temco Electric Motor Company against the Forest City Electric Company, as showing the type of absorber involved in the Forest City case by way of prior use absorbers and J. M. absorber, and which Judge Westenhaver held was no anticipation. Defendant's counsel did not offer it as prior art, but by way of explanation, and was advised by plaintiff's counsel that the exhibit was already in the case in connection with plaintiff's own exhibits herein before enumerated and thereupon defendant withdrew the said exhibit *J*, being an illustration of a prior use absorber known as the J. M. Absorber.

Defendant offered in evidence an advertisement of the Edwards Brothers Company of Leipsic, Ohio, appearing in "Motor Age" of July 21st, 1924, as Exhibit No. 45, also a similar advertisement as defendant's Exhibit No. 46.

Defendant then called as a witness on its behalf, Mosley Arthur Keller, who testified as follows:

That in the fall of 1917 he became counsel of the K. W. Ignition Company in association with other counsel, that the period of his employment extended from the Fall of 1917 until the Fall of 1921, at which time a disagreement arose and he withdrew from the litigation of that Company; [fol. 29] that at the time of his withdrawal he was handling approximately 9 patent suits, including a suit against the Ford Motor Company on the ignition system and a part of the accounting in the case of the Temco Electric Motor Company against the K. W. Company on the shock absorber patent in suit, and various other cases that involved patents other than shock absorbers. He further testified: "I had to sue the K. W. Company for my fees. That suit was brought for me by Judge Day in the District Court of Cleveland. I think that was brought in 1922. After being postponed several times on account of engagements of counsel on each side, it was finally compromised in the summer of this year, I think it was in June, and I took over, in part payment of my fees, the Storrie patent, which was then held by the K. W. Ignition Company. However, the K. W. Ignition Company retained a license under that patent. They are now making shock absorbers which they claim are within that patent, which does not employ a coiled spring, but if a flat spring, and subject also to a license that Mr. Storrie held, and which in turn was utilized by the Apco in the manufacture of this absorber. The assignment which I do not have here, is recorded, and has been recorded in the patent office. The ownership of the patent is absolutely in me and in fact I am now negotiating with several concerns to grant licenses under that patent."

The defendant further offered in evidence all the affidavits and exhibits that were submitted to the Court in the preliminary injunction case.

Defendant then formally made tender of the depositions that were taken on its behalf and rested its case with the [fol. 30] understanding that the second affidavit of Frank L. Dyer should be received in evidence, which affidavit was procured and filed with the clerk of Court as an exhibit in this case.

It was stipulated between counsel in open Court that the defendant Company closed its branch office in Atlanta since the denial of the preliminary injunction. This stipulation was one of bare fact and did not admit its relevancy.

Rebuttal Proofs on Behalf of Plaintiff

Robert Craig was called on behalf of plaintiff in rebuttal, and stated that he resides at Dayton, Ohio, and is a consulting engineer. He then further testified as follows: "I was graduated from the University of Minnesota in 1897 with the degree of Mechanical Engineer. After that for several years I was in the gas engine business, in the factory and in the field, designing, installing and experting. After that I was in the automobile business for several years, in charge of the Oldsmobile service station in Minneapolis. After that I was in the gas engine business again on my own account, selling and installing gasoline and gas engines and other machinery. Then I entered the automatic scale business and have been in that practically continually ever since, designing, installing, selling and in charge of the engineering work. Most of my experience with automatic scales has been with spring scales. The last few years, well up to the beginning of this year, I was in charge of the engineering work for the Dayton Scale Company, of Dayton, Ohio, [fol. 31] and I am still retained by them in a consulting capacity. I have taken out patents on several scales involving springs, and now have patents in the patent office on scales of the spring type. All of these patents have been taken over by the Dayton Scale Company for a consideration. Since the first of this year I have been practicing as a consulting mechanical engineer, specializing on scales and weighing machinery."

The Dayton Scale Company and the Computing Scale Company of America are subsidiaries of the International

Business and Machine Corporation of New York. They make an extensive variety of machinery requiring time clocks and scales. I worked for them on all those lines, but principally with scales definitely.

He further testified that he investigated the Temco Shock Absorber and understood its operation, and that he had helped to install them on cars and run them on Ford cars, that he had tested Ford cars with and without shock absorbers, that he had made a test of shock absorbers and those two springs and that he had read the deposition of Mr. Storrie. He then further testified as follows: "I was supplied by Mr. Toulmin with a copy of a report of the test made by Mr. Storrie purporting to show the action of an Apco spring in a test in an effort to prove that it worked according to some law different from straight steel helical spring. In order to verify this report of this difference I endeavored to make a test along lines similar to which I have been accustomed to make tests and they occurred as showed in the photographs. I mounted up an Apco shock absorber on a rigid support and arranged so that I could load it with the customary fifty pound test weights such as are used for testing scales for accuracy. Upon applying [fol. 32] the load I found the action of the shock absorber to be so erratic that I had to investigate further to find what the trouble was. I found considerable friction in the links and I found that the spring of the shock absorber would waver, bend around first one way and then the other, so that the pointer, which you will notice, adjusted to a graduated scale, was not giving the true indication of the action of the spring itself free from the deflection and friction.

In this first photograph the absorber is being tested exactly as it is made, with the guide links connected. As to overcoming the difficulty in making the test, I disconnected the said links, which you will see hanging down below the spring, and continued the test as before. The results were still so erratic as to be impossible to read because the upper part of the spring would shift first one way and then the other and the pointer would be moved relatively to the scale without reference to the actual depression of the spring. That is the tilting and change of the spring sideways would change the reading. And the indication of the action of the spring is shown in the photographs.

He then stated that the photograph which was handed the judge did not have the radius link present and testified as follows: "This next photograph is a side view of the preceding test in which the links are hanging straight down and the load attached thereto. This shows the cone shaped or beehive spring is not immune from tilting sidewise. Finally in order to get a true test of the spring without the collateral condition, such as friction and tilting. I took the spring from the absorber and supported it on the rigid [fol. 33] bar with the pointer extending from the bottom of the spring adjusted to a vertical scale, then loaded the scale as before with varying loads and tabulated the resiliency. The result shows that for every fifty pounds added to the spring it increased in length one eighth of an inch. In the chart I am speaking of the figures arranged on the left side of the chart show the load and on the bottom of the chart show the deflection and the resultant line is a plot of the resultant curve showing the deflection of this spring, being a straight line, which means it conforms exactly with Hooks law, which states that the deflection of a spring is proportional to the load applied to it. It is not true of the Storrie test."

The photographs were then numbered in the order in which they were handed to the Judge.

He then testified that the Storrie test or diagram did not correctly illustrate the true action of the Beehive spring and that so far as he knew, there was no difference whatever between the action of a beehive spring and a straight sided helical spring; that there was no mathematical difference from the investigations he had made. Plaintiff then offered in evidence this set of photographs as plaintiff's Exhibit No. 35.

Thereupon the Court examined the witness and the witness testified as follows:

By the Court:

Q. Hooks law applies equally to all coiled springs?

A. Yes, sir, every mathematical formula for computing springs, so far as I know, shows that the deflection varies directly according to the load applied, without reference to [fol. 34] the form of the spring. The helical spring such

as we are discussing here is almost entirely torsional. That is proved by the fact that if you take the spring and straighten the rod and lay it horizontal in that form of a bar and put a little pully on the end of it, of the same diameter as the coiled form, and apply the pully to that you wil- get the same deflection as if the spring were in a coiled shape.

Q. And that is due to torsion?

A. Due to torsion, yes, sir.

Q. And the torsion is now in the coiled springs?

A. No, sir.

Q. And the conclusion is the torsion will be the same at the same load whether in cone shape, straight or any shape?

A. Exactly, it may be straight or cone shaped or straight side, any shape you please.

The witness then testified in answer to question by plaintiff's counsel whether he made the investigation as to whether or not there was some pivotal action of the front shock absorber when mounted on the stanchion as Mr. Storrie had testified, and he replied: I did make such a test, and the results are shown by the photographs which I have. The first one I will mark No. 1, which shows the front view of a Ford auto in normal position with shock absorber springs in normal position. The second photograph, which I will mark No. 2, shows the same auto with a jack placed under the center of the frame in front, behind the axle, by which the front spring, the leaf spring is raised the entire length of the front of the car so that the front end of the car is off the ground, although these wheels show they are still in contact with the ground they are just barely [fol. 35] touching and either wheel can be turned by hand. That was carried a little further in the photograph which I will mark No. 3, in which it is clearly evident that the front end of the car is raised clear of the ground, and it will be noticed that the springs of the Apco absorber are still in the position in which they were originally, that is no tilting action can be obtained whatever under the extreme conditions shown in the test. These large photographs were made with glass plates, but I made some smaller photographs on films so that I could bring them along, and it will be noticed that if the Photographs are superimposed so, and

the axles coincide, that the Apco springs are still in the same position in both photographs.

Q. What is your conclusion then from this test as to whether or not the Apco front shock absorbers pivot in the most extreme condition you have mentioned here?

A. They do not pivot.

Q. Is it possible for them to pivot if carried up any higher?

A. No, it would not.

Q. Why not?

A. Because the position shown is the extreme position of all the springs, the leaf spring now is in the form of an arch in tension, a smooth curve from the extreme outside point where it connected with the Apco link over—a curve to the extreme outside from the Apco, so that any further raise would not change the relative position of the springs.

Plaintiff then offered in evidence certain photographs as a single exhibit 40, 41 and 42. Three photographs offered [fol. 36] as Exhibit 35 were marked by the clerk Nos. 35, 36 and 37 and the two additional photographs identified by the witness thereafter marked Nos. 38 and 39.

Plaintiff then offered in evidence as exhibits two negatives, Exhibits Nos. 43 and 44. Witness then testified as follows:

Q. Mr. Craig, in this case an issue has been raised by the defendant such as this, that it makes no difference whether you put the helical spring on the axle first and then the leaf spring, or put the leaf spring first and then the helical spring. State whether or not there is any difference in the arrangement or order of the springs?

A. There is. The shock absorber on any car includes not only the springs but the tires, and the way the system operates is substantially as I will explain: Any small bumps or inequalities on the road surface are absorbed by the tires, and don't get to the axle or springs at all. Any bumps or inequalities which are too large for the tires, are communicated to the axle through the wheels and in the Temco system these shocks of intermediate size are absorbed and neutralized by the coiled springs which are rapid action springs due to the fact that they have no friction between their leaves. Any shock which is too large for the

tires and coil absorbers is communicated from there to the leaf spring, and ultimately reached the body of the car in reduced form. Now the leaf springs are used in connection,—in contact and connection with the body because the leaf springs have friction between the leaves which serves to dampen or stop the vibrations. If there were no leaves and consequently no friction, the body of the car would vibrate for a considerable length of time. As there [fol. 37] is no friction in the coiled spring it is subject to that vibration. Now if the order of the springs were reversed, the minor inequalities would first pass through the tires, be absorbed by the tires, the intermediate bumps would pass from the tires to the leaf spring, which is comparatively rigid, and through the leaf spring they would be transmitted almost entire to the coiled spring which is connected to the body and there is,—not only would the body receive the shock in greater magnitude than with the other arrangement, but there would be nothing to dampen out the vibrations on account of the non-friction type of spring put in connection with the body. It is well known among people who work with springs, that unless there is friction it is very easy to obtain greater vibrations through a spring than would be expected from the size of the original bump or inequality in the road. It is easily seen when the auto strikes a series of bumps or inequalities in the road in which case the front of the auto will bounce violently, through a greater distance than the inequalities or bumps on the road, and it is to avoid that bouncing action that the leaf springs, having friction, are used.

Cross-examination

By Mr. Keller:

The witness on cross examination stated that the long narrow bar shown in Plaintiff's Exhibit 36 was made of steel, not only supported at one end in a vice, but also by a two-by-four column, supporting the other end. It is not a scale beam. In connection with the experiment of exhibit No. 36, he found that there was a lateral pull in the spring, lateral waver as the witness termed it, and when asked what caused it testified that the load evidently was [fol. 38] not applied axially on the spring, some of the

waver being due to the fact that there was friction in the links and the links drew the torsion to the central part up through the center of the spring, over to one side. He was then asked the following questions and testified as follows:

Q. So that the friction in the links would cause the waver would it not?

A. That would help to cause it, yes.

Q. You mean these radius links in the absorber?

A. Yes, sir.

Q. Is the absorber in this Exhibit 36, the absorber where the links were disconnected or were they connected in their normal relationship with the rest of the absorber?

A. In that one they are disconnected.

Q. Did you make a test where the links were connected in Exhibit 35, the links were connected in that absorber, that is true?

A. Yes.

Q. Did you find on this test any wavering by the spring?

A. There was.

Q. Was it caused by the same reason you have explained in connection with exhibit 36?

A. Not entirely by the links in that case.

By Mr. Toulmin:

Q. 35 he is referring to?

A. Yes, not entirely from the friction, but the links were helping to start it.

By Mr. Keller:

Q. That is a lateral waver of the spring, is that it?

A. Yes.

[fol. 39] Q. That is Exhibit 35?

A. Exhibit 35, yes.

Q. Where was the waver most pronounced, at the base or at the top of the spring?

A. At the top, I paid most attention to the waver at the top of the spring because my enunciator or pointer was attached to the top of the spring.

Q. What was the degree of that waver with reference to the displacement of the absolute center of the absorber?

A. I did not measure it.

Q. Approximately?

A. What do you mean by degree?

Q. How much of a waver did it waver, a quarter of an inch, half an inch or an inch?

A. It wavered, the end of the pointer would, as much as half an inch away from the graduated scale on which I was taking the measure.

Q. On the test of this exhibit 35 then it wavered as much as half an inch?

A. I don't know that the spring wavered that much, but the end of the pointer.

Q. Well, the end of the pointer is about in line with the top of the spring?

A. It is about four inches.

Q. I say it is horizontal, it is in line with the top of the spring?

A. Yes, sir.

Q. What was the purpose of that clamp?

A. That was to hold the pointer on. In making the test I was not particularly interested in the action of the absorber as a whole, I was after the action of the spring itself with reference to Hook's law.

Q. But you did find it wavered?

[fol. 40] A. Yes, it wavered.

Q. Now in this test of Exhibit 35 or 36, there is no connection with the leaf spring at all, is that true?

A. No, none.

Q. The test of Exhibit 36 was made without the radius links being connected, as I understand?

A. Yes.

Q. And is Exhibit 37 an illustration of the side view of this same test of Exhibit 36?

A. Yes, sir.

Q. What was the object of disconnecting the links and forcing the vertical links to one side?

A. We did not force the vertical links to one side. The object in disconnecting the links there was to try to test if possible what the spring itself, in the absence of friction or any other agency except torsion of the spring, the spring assumed that position itself.

Q. I understand that was just to test the action of the coiled spring per se?

A. Yes, sir.

Q. Would it or not deflect inversely as to the size of its base?

A. Yes, it would be more as the base was——

Q. Restricted?

A. Restricted.

Q. No- referring to Exhibit 37——

A. In my last answer I mean, of course, that the spring be free of outside influences.

Q. What do you mean by that?

A. Well, if any spring were started in a vertical position it would remain in a vertical position. I am considering the springs as separate from all other mechanism in my answer.

Q. If they were connected that waver would be minimized and overcome, is that it?

A. Yes.

Q. Now take Exhibit 37, in which the radius link has been disconnected and the load allowed to travel in a vertical plane established by the waving of the spring, what would have been the result if that spring had been a straight steel spring of a diameter not greater, say, than the top coil of the spring in 37.

A. It would have gone to one side as far as that mechanism would have permitted it, just the same as this spring did.

The witness then testified that in the experiments with Exhibits 40, 41 and 42 he interposed an ordinary automobile jack between the earth and the center of the front leaf spring and jacked up the front of the car, that the jack and a screw operated jack which gradually lifted the car upward. When asked why he did not force the car further upwardly to permit the shock absorbers to turn on the [fol. 44] pivot he replied that they would not turn no matter how far they were shoved up; that they were shown at their extreme limit of motion, the car being off the ground; that he relied on the weight of the front axle and wheels to displace the shock absorbers, and they also jumped on the wheels, a man on each side, to see if there was any pivotal motion. We jumped on each side at the same time and one side at a time, tried every dodge we could to get a deflection of the absorbers as a whole and could not get any.

Defendant's counsel then showed the witness a model which was marked and offered as defendant's Exhibit 48, whereupon plaintiff's counsel objected as shown by the following statement:

Mr. Toulmin: We want to be heard on this subject. We object to this model as being an accurate model, with any properties to represent a Ford car.

The Court: He is representing the springs, doing exactly what I want to see done. Go ahead.

The witness was asked and testified:

Q. These shock absorbers of the exhibit just referred to are pivoted on, the standard model shock absorbers and are connected with a spring, you notice when I press down on one side the shock absorber is pivoted, moves, does it?

A. Yes.

Q. What causes that pivot move?

A. It is the leaf spring from this pivot.

[fol. 45] Q. It is pressing down on one side and elevation on the other, is that so?

A. Yes.

Q. So if enough leverage is applied or enough force is supplied, the Apco shock absorber will have a pivotal action on the stanchions of the Ford car?

A. It the force is applied in the right direction, yes.

The witness testified that he made tests with a Ford car by having the car driven toward him over a series of bumps, some of them being two by four, four by four, six by six and one ten by ten, (evidently referring to timbers of those dimensions), that he saw no movement whatever of the shock absorbers, that they went over those bumps with one side of the car and the other side and both sides simultaneously, and that it made no difference in his opinion whether the absorbers were pivoted to the stanchions or tightly fixed thereto.

He was then asked the following questions and testified as follows:

Q. Now when a coiled spring is connected in series with a leaf spring and a shock passes through to the springs, or rather the two springs are in, you might say, the circuit of

a shock, and that shock is not large enough to deflect the leaf spring and cause it to come into play in any manner whatsoever, the coiled spring will act to absorb that shock, isn't that so?

A. Yes, sir.

Q. That is the true way of absorbing, and the coiled spring is interposed between the end of the leaf spring or between the leaf spring and the entire body in that circuit through which the shock is received?

[fol. 46] A. No, that is not true.

Q. Why?

A. Because the coiled spring has an action different from the leaf spring, and the coiled spring, when it is deflected, will start vibrating and will continue to vibrate, if there is nothing to stop it, for some time. With a coiled spring you can get much greater amplitudes of vibration than the originating vibrating motion. You get the same action as if you pull the end of a rubber band by a very slight motion of the hand, if it is timed properly you can get an enormous amount of pull on the end of the band, going clear across the room, if the band will stand it.

Q. That is because of systematical delivery of period of force, that is what you would call synchronism?

A. No, that is not synchronism, it is actual periodic vibration by means of pull or push, whichever it is superimposed on the forced vibration of the spring, for illustration.

Q. Well, is it inherent in the spring itself or in the construction of the spring and the relationship?

A. It is inherent in any spring that has no friction to retard its motion. We get the same thing in automatic scales, they have coiled springs to resist the load. If the dash pot is disconnected and a load is placed on the scale a large and almost endless vibration was set up, before the coming into use, for the purpose of stopping that for scales, of this oil dash pot, but on automobiles it is not found practical to use the dash pot and this leaf spring, having friction between the leaves and the body does dampen part of the vibration from the inequalities on the road.

Q. In other words, if you took a coiled spring and associated it with some elements that had friction between them, as the leaf spring has, there would be very little difference [fol. 47] between the leaf spring and the coiled spring, is that so?

A. There would be this similarity that both would come to rest, promoted by that friction between the leaves.

Q. It is also a fact that the coiled spring absorbs shocks that the leaf spring cannot absorb on account of this friction retarded combination of the leaf spring?

A. Yes, the coiled spring, being much more quickly acting spring on account of not having any friction, will absorb some shocks more easily than the friction spring.

Q. Referring to this model, you will notice it is reversible and that by pressing down upon the top panel, just under the top panel the absorbers depending, you find there is a certain action of the absorbers, do you not?

A. Yes, sir.

Q. I reverse this so the lower panel becomes the upper and the shock absorbers in upright position, I press down the same way, is the same action set up in the shock absorbers according to your observation?

A. Why, the springs all compress, yes.

The Court: I want to ask this question:

By the Court:

Q. Is your opinion that when a coiled spring and a leaf spring are interposed between the shock and the load, that it makes any difference as to which spring is next the load, is that based on experiment or just your opinion?

A. No, it is based on experiment and on methodical physical properties.

[fol. 48] Q. It is inconceivable to my mind is the reason I asked if that difference existed.

A. I will have to repeat a little. If you have a load attached to a coiled spring which has no friction between and you displace that load to the extent of the leaves compressing the spring and then release it, the coiled spring will vibrate and continue to vibrate. Now if at the upper end of that spring—I can illustrate it better by moving an object in a horizontal plane——

Q. Just take those two springs there, how could they know whether the shock was coming from one way or the other?

A. Well, if you had two objects connected by a coiled spring and have that spring sufficiently stiff, and move one object and the other will move just as quick, and as you decrease the stiffness of that spring when you move the

first object the second will follow with less and less speed, the shock will be better absorbed. Now if you vibrate this rod, there is no friction, of course, you would displace this object and the second object will follow it and compress the spring and the vibration in this second object, the automobile in which you are riding will get that vibration, it is a thing inherent in the coiled spring. Now there are two things to consider in the absorption of shock, the first is to absorb the shock itself and then settling the jump or vibration caused by the shock. If you vibrate this first object back and forth you can induce in the second object an amount depending on its motion and the character of the spring, much greater than the original displacement motion of the first shock.

Q. That is when a little force is added every time plus the result of the former force, I understand that. Take these springs, the first shock comes from the wheels and it is not entirely absorbed, and the next shock is when the load [fol. 49] comes down. While the main shock comes into this coiled spring, it looks to me like with this machine what would happen is the upward force will come against the load and every spring in between is compressed according to its ability.

A. That is true so far as compression is concerned, but we are considering two elements under the body of the car. You can argue the same thing with reference to the tire of the wheel, every rubber tire that absorbs the small irregularities in the road, it has been argued and many inventors have tried to prove, that by taking the rubber off of the tire and leaving the rim steel and putting in a rubber cushion to come form up in the car you could accomplish the same purpose, but it has never worked because of the same physical laws involved. It is the same in effect if you take this coiled spring from its position adjacent to the axle and place it up here. Now in this position, as shown in the model, when a shock comes from the axle into this spring, this spring will vibrate and you don't care whether it keeps vibrating or not, because no effect from that spring is transmitted to the body of the car, it is transmitted to the leaf spring, which stills and dampens those on account of the friction. Now, if you place this coiled spring between the leaf spring and the body the shocks which come

from the axle are transmitted through the leaf spring, possibly somewhat reduced, but transmitted mostly intact to this coiled spring and you have got those very vibrations set up here in the coiled spring which you had in its former position and you have nothing between the coiled spring then and the body to dampen out the vibrations.

Q. I thought about that two weeks and I could not get it through my mind. Now let me ask you about the experi-[fol. 50] ment, what was the experiment you made that demonstrated that. Has anybody ever made a Ford with four wheels on top and four wheels on the bottom and turned it upside down?

A. No, sir, I have seen lots of Fords in that position, but I didn't know that they would run that way.

Q. You said you experimented?

A. No, I remember I did not make any experiment with reference to the Ford, but from old experiments, laboratory experiments in the physical laboratory, I remember, in which we suspended a ball of iron or lead or something on a spring, then we moved that coiled spring, moved the spring up and down to study the effect on the ball, then we would try rapid vibrations on that ball until we got the vibration it would ultimately reach or produce.

Q. That, of course, was a simple coiled spring, I mean a combination.

A. I am working up to that. The vibration of that ball, the object, which in this case corresponds to the automobile body, were very violent. Then as a further step in the experiment we would put a dish of water so that the ball, the object on the lower end of the spring, would be immersed in the water and so afford a fluid resistance, dampening out the vibrations. Now the ideal apparatus in an automobile would be that thing, a fluid dash pot, just as we use on scales, but it is not satisfactory on automobiles, and the most satisfactory thing has been the leaf spring, which operated in the same manner as a damper for the vibrations.

Q. I understand all that, but why would it not dampen just as well upside down as any other way, I don't see.

A. Well, as I explained it, if it is upside down the coiled spring would be next to the body then and you have got nothing under the body except the coiled spring, you have

[fol. 51] got no dampening effect for the vibrations whatever. Attempts have been made to use coiled springs on automobiles, they are much cheaper than leaf springs, every manufacturer in the automobile business would use coiled springs if he could, they are so much cheaper than leaf springs, but they will not answer because the vibration can't be dampened out.

Q. I understand the advantage of the coiled spring is the quick action and softness, now when the compression comes from a different side the weak spring will be the one to give way.

A. Yes, sir, the weak spring will give way, but the ultimate effect on the body, the vibration up and down, depends on whether there is something between that body and the coiled spring to dampen the vibrations.

Q. The very fact that it is up and down seems to me to make it come first one way and then the other, and it does not matter much which way you turn it will come from one way and then from the other.

A. Yes, sir, but the element under the body is depended on, from the fact that all automobiles use leaf springs, use them to dampen the vibration, the friction effect to dampen the vibration.

Q. I can see that it would not do to fasten the body through where the leaf spring is, but it seems to me the action would be up and down exactly the same.

A. Well, if the leaf spring is attached to the axle and the coiled spring is attached to the body there is nothing between the coiled spring and the body, and you have nothing to dampen out the vibrations caused by the shock through the leaf spring.

Q. The leaf spring is still there?

A. Well, it is on the other end, it is not where you want it. If the shock came the other way came from the coiled [fol. 52] spring first, then the leaf spring would relieve and cancel the vibration.

Q. Does not the shock come the other way just as soon as the compression settles down, first from the road into the body and then down from the body to the wheels?

A. With the coiled spring attached to the body, when the shock is received there is a periodic vibration set up in the body and that spring will help to continue that vibration,

which is very offensive. They use the coiled spring on freight cars, but in passenger cars they use leaf springs to do away with the bouncing of the body.

He then further testified that in his reference to the taking of the tires off the wheels and interposing between the wheels and the springs or the body a pneumatic cushion, that the amount of pneumatic cushion interposed would have to equal the amount of tires taken off the wheels, that he had never made any calculation on the matter, and that he had seen automobile wheels that the whole center was solid rubber, but he knew nothing about the composition of the rubber. Asked as to whether he would want to testify that the theory is generally impractical on account of a particular instance when it might depend on the type of rubber, he said it is absolutely impractical in automobiles to accomplish the absorption of the shock. As to whether he agreed with the theory of Grover Cleveland that theory and condition are two entirely different things, he said no, not that theory, but conditions necessitate proof.

He then further testified in answer to questions as follows:

[fol. 53] Q. Now the purpose of a leaf spring in a Ford car or any other car is to interfere and get rid of some of the jolts, is that so?

A. Yes, sir.

Q. And the vibration in the motor, it absorbs some of them?

A. Yes.

Q. There are some shocks that it can't absorb, they are too light to disturb the leaf spring, isn't that so?

A. Yes, that is so.

Q. And there are some that will pass through the leaf spring?

A. Yes, follow through it.

Q. No matter whether shock absorbers are on it or not?

A. Yes, sir.

Q. So that the occupant of the car is really the shock absorber of those that pass through the car.

A. Yes.

Q. Now you have said you were speaking of conditions where friction was absent, friction on the coiled spring

would retard its freedom of action, under the theory just stated?

A. Yes, friction attached to the body which the coiled spring is vibrating.

Q. Exactly, so that if the coiled spring is hindered by friction, the coiled spring in that instance becomes pretty much the same as a leaf spring, that is if friction retarded, isn't it?

A. No, if you attach a coiled spring to certain turning mechanism, certain amount of friction and then permit that to attach to a leaf spring and the same mechanism, you get an entirely different action.

Q. I mean this, that insofar as the freedom of action of the coiled spring is prevented on account of friction, it falls [fol. 54] pretty much in the class of the leaf spring, which is also friction retarded, it is friction in each that interferes with the freedom of action?

A. That is true. Hook's laws does not apply to a leaf spring when it is made not in the form of leaves bolted together.

Q. Hook's laws don't apply?

A. No.

Q. Why?

A. On account of the friction between the leaves.

Q. Hook's laws would not apply to a coiled spring retarded, where retarded by friction?

A. It would still apply to the spring that is interfered with by friction.

Q. And so far as the individual leaves of the coiled spring are concerned it would apply to them too?

A. Yes, that is true.

Redirect examination.

By Mr. Toulmin:

Q. Mr. Craig, referring to this model and the actual conditions of the Ford car, what would you attach this coiled spring to if you tried to fix it in an inverted position, put the leaf spring on the axle?

A. That is impractical, there is nothing on the Ford car to which, on the upper parts to attach it to. You would have to build something to the car.

Q. When this model is in inverted position the top part represents the structure, does it not, except that it is broader than in the Ford car, is that true?

A. Yes, that is true.

Q. In the Ford car when you have Apco absorbers on it would it be possible to tilt those absorbers by hand as in this model on the front axle?

[fol. 55] A. Yes.

Q. You notice Mr. Keller has taken hold of here and tilted this model when they are hung by that leaf spring?

A. Yes, that can be done by hand.

Q. But you have caught hold of it and pulled by hand?

A. Yes, he put leverage under it.

Q. But you can't do that in the operation of the car, is that true?

A. Yes, that is true.

The witness further testified, as to the Apco absorber being fixed and not pivoting when jacked up with the leaf spring in operation, that he found no pivot whatever in the operation.

Defendant rested its case and the plaintiff's counsel made a statement that he understood the plaintiff's rebuttal affidavits were included in the offer of plaintiff's Exhibits.

The following remarks form part of the record in connection with the offering of defendant's Exhibit No. 44:

The Court: Then there is nothing else, except Mr. Dyer's deposition.

Mr. Keller: We would like permission to offer this model in evidence.

The Court: All right, I don't know that it is evidence but it may be helpful in understanding the case.

Admitted and marked Defendant's Exhibit 44.

[fol. 56] STIPULATION THAT RECORD ON MOTION FOR PRELIMINARY INJUNCTION BE RECEIVED

It is hereby stipulated between counsel for both parties that the record on the motion for preliminary injunction in this case may be received and used at the trial of this

case, including the affidavits on behalf of both parties, and any and all exhibits offered and received on behalf of both parties, subject to the right or opposing counsel to cross-examine the witnesses at the places of residences of the witnesses and right of both parties to produce the witnesses for further examination either at the places of their residences or at the trial in open Court.

As an exception to the above stipulation it is stipulated by and between the parties that the testimony of the experts may be taken de novo at the trial, and that this stipulation does not enable the parties to cross-examine the expert witnesses on either side at their places of residences before the trial.

In accordance with the above stipulation counsel for the defendant, the Apco Manufacturing Company, produced Mr. William Storrie for further examination on behalf of the defendant and for such cross-examination as the plaintiff may desire.

William Storrie

William Storrie, a witness produced on behalf of the defendant, testified as follows: My duties with the Argyle Motor Company in Glasgow, Scotland, for several years was in designing automobile parts and complete cars, that is, including all details that go to make up one complete car; later I was given the position as chief designer for the above company. This entailed going into the absolute retail of all parts and their effective operation. I was employed in these different capacities in the Argyle Com- [fol. 57] pany from I should say, 1902, from the beginning of 1902 until about the end of 1906. In the fall of 1906 I left Glasgow, Scotland, and came over to the United States. I was then employed by the Providence Engineering Company, of Providence, Rhode Island, as designing draftsman. This class of work was also similar to what I had been used to with the Argyle Company. I was also employed by the American Locomotive Company, of Providence, Rhode Island. The approximate date of being employed by the American Locomotive Company was 1910. I was with the American Locomotive

Company up to the spring of 1912 when I took a trip back to Glasgow, Scotland. The nature of my employment with the Locomotive Company was in designing automobile parts and truck chassis. My work combined the designing of springs necessary as a completement to pleasure cars and trucks. The present type of spring used in the present Apco absorber is a result of no more fanciful idea but is a result of concentrated effort to design an effective spring to resist the various pressures and actions which come upon that spring when applied as a unit and a combination element connected to the leaf spring. The first idea was to get stability, that is within the spring design itself, to resist those actions as far as possible. This I consider, is obtained by the conical outline of the said spring having a large diameter base. It also has the function of resisting a load at a variable scale of resistance per inch of deflection. This enables the coil spring to coordinate with the leaf spring under all conditions of load applied through the leaf spring; that is, under light loads the large diameter soils would deflect first and than as the load increased the upper coils would come into operation and co-operation with the leaf [fol. 58] spring so that under almost all conditions of a load from the minimum to the maximum degree come into action in the Apco spring resilient coils to absorb the shocks. In the Thompson absorber employment was made use of a narrow straightsided spring which from the drawings of the Thompson patent employs a relatively small diameter straightside spring which has within itself no stability but depends upon the use of upright stanchions, sleeves and guides to enable it to function at all. The fact of the Thompson spring being straight-sided means that it is a spring of a constant rate of deflection under loads. This means that it may deflected to a certain extent under light and medium loads until the sleeve marked H is stopped by the washer F on stanchion D. At this time there is no value in the said Thompson spring as a shock absorbing medium. I might say my experience has been, with straight-sided springs, that unless guided in its deflection there is a buckling action or a whipping action due to the resilient load being applied at the top of the spring acting outside the center of the vertical pull. I

have noticed in public absorbers of different kinds some with the shell removed and noticed the said action of this spring which had an oscillating movement. The action is to a greater degree when the spring is of a narrow diameter than it would be if the spring had a larger base. The development of the present Apco absorber spring is a result of these observations.

Mr. Toulmin: The answer of the witness and so much of the question which drew the answer relative to the operativeness and consequent validity of the Thompson patent is objected to because this question has already been tried and settled by Courts of competent jurisdiction and finally [fol. 59] disposed of by the Sixth Circuit Court of Appeals so that the question is no longer open for discussion. Notice is accordingly given that a motion will be made to strike out such testimony, all similar testimony along this line, as incompetent and immaterial in the present cause, and improper testimony.

Mr. Keller: The defendant, in its answer, avers that the Thompson shock absorber made under the Thompson patent is inoperative and counsel disputes the statement of plaintiff that the particular question of inoperativeness of the Thompson patent based on the facts which will be revealed in this case was ever decided by any Court for the simple reason that the facts were never presented to the Court. Defendant will show that these facts which were clearly within the knowledge of the plaintiff were never revealed to the Court in any prior cases which were litigated.

Stability obtains in the conical spring and not in the straight-sided spring because, due to a large base and a consequent bee-hive type of the spring, there is a resistance to the whipping action which develops in a spring using no guides. The resultant pressure on the Apco shock absorber, or any other similar type of shock absorber, is at an angle and therefore the conical sided shaped spring is set to resist that resultant angular pressure. If such a spring as shown in the Thompson patent was used the top of the spring would tilt over due to the said angle of pressure and the narrowness of its base which has no resistance to that pressure.

The witness then testified as follows:

Q. You speak of having observed the action of shock absorbers having straight-sided springs without guides, where [fol. 60] did you observe those shock absorbers and of what manufacture were they, if you know?

Mr. Toulmin: It is understood that my objection extends to all these questions and all questions of similar import.

Ans. I have noticed these defective shock absorbers round Providence and to the best of my knowledge they were of Halliday, Temco and K-W.

Q. Will you please state in a little more detail just what was the condition of these shock absorbers when you observed them?

A. In the case of one, which I believe was the Temco without the disappearing shell on one side, the top part of the shell was gone and the other side was covered with a cloth. The spring was off center, that is, the top of the spring, showing a positive tilting action. In other cases, where there was a disappearing shell or telescopic shell, one side of the shell was badly worn. In the case of one car which had the K. W. shock absorbers where the shell, where the guiding shell had evidently been knocked off by the mud-guard supporting rod, the spring was tilted very much off center and oscillating while the car was moving over the road. This K. W. spring, to my recollection, was one of small diameter and very long in proportion to its diameter.

Mr. Toulmin: That portion of the answer which was an assumption as to the cause of the alleged injury to the shell being without the knowledge of the witness is objected to and motion will be made to strike it out.

Mr. Keller: Comment is reserved for final hearing.

[fol. 61] Q. Referring to the statement of the plaintiff's counsel, on what knowledge or facts did you base your statement that the shell had been knocked off by the mud-guard rod?

A. Because on similar type absorbers I had seen indentations on the top part of these shock absorbers which indicated blows coming upon the outside casing.

Mr. Toulmin: The same objection.

Mr. Keller:

Q. Referring to this K. W. absorber, in other respects what was the condition of the absorber? What condition was it in, the general condition of the absorber?

A. The elements of the shock absorber were all there minus the outside shell, but the spring itself, its connecting link and guide, were lying very much off center.

Q. Referring to your observation of the Temco shock absorbers, what type of Temco did you observe? Was it what is known as the old Temco absorber or the second type with the telescoping shell?

A. It was both.

Q. Did you notice the condition of the second type with the disappearing shell, the condition of the working parts?

A. I noticed that the top shell was not concentric with the base of the shock absorber. That together with the indentations was what I observed.

Q. In the second type of Temco absorber with the telescoping shell, state whether or not you observed any where in the telescoping shell was off the absorber?

A. No, I can't say that any of the telescoping shells were off the absorber only on the fixed type.

[fol. 62] Q. Referring to straight-sided springs and to the Storrie patent which *which* is involved with the interference with the second Thompson application, the Storrie patent showed a straight-sided spring, did it not?

A. It did.

Q. And you manufactured shock absorbers under this patent, under this invention and patent, employing straight sided springs?

A. Yes.

Q. What was your experience in the tendency to tilting of the spring as to which you have testified so far as the original Storrie structure is concerned?

A. My observation included the realization of the tendency of the straight-sided spring to buckle under load in this type of absorber, but in the Storrie absorber the straight-sided spring was larger in diameter and shorter in length than any of the others to my knowledge, and this buckling action was present but to a very limited extent. I realized

the possibility of this fact and in my interference record there is given in evidence the fact that I made in 1915 a layout of a shock absorber having a tapered spring. I also made absorbers with this tapered spring during 1915, 1916 and 1917.

Q. Did the tilting tendency of the straight sided spring in the original Storrie device, render the shock absorber inoperative?

A. No, it did not.

Q. Did you employ in the original Storrie shock absorber a guide over the spring?

A. I did not.

Q. Would it be possible to employ in a Temco shock absorber, or a shock absorber rather made upon the disclosure or drawings of the Thompson patent in suit, to employ a spring having sufficient base width to overcome such tilting [fol. 63] action of the spring as renders the absorber inefficient or inoperative?

A. I don't think it would be possible, in fact, I know is would not be possible to incorporate such a spring in the Thompson patent arrangement unless you supplied along with such absorber a very much narrower front spring for the Ford car; of necessity this arrangement with the load being applied on the extreme points off the center of the spring and such spring being guided by sliding sleeves the action upon the outside sleeve would render said sleeve inoperative.

Q. You say a Ford spring of less width, what do you mean by that?

A. Oh, Shorter in centers.

Q. What centers?

A. Between the eyes.

Q. What eyes?

A. The eyes of the springs where the shackle bolts go through.

Q. You mean, the ends of the leaf spring?

A. Yes.

Q. Why would the springs have to be shorter?

A. Because the point of the application of the shackles on the guiding covering of the bee-hive type of spring would overlap the original length of the Ford front spring.

Q. Would that also be true of a spring of straight side having a sufficient base to prevent destructive tilting?

A. It certainly would.

Defendant offered in evidence original letters from Toulmin & Toulmin to William Storrie under date of March 1st, 1916 and March 7th, 1916, and carbon copies of letters [fol. 64] from William Storrie to H. A. Toulmin Jr. under date of March 4th 1916 and March 10th, 1916, the letters being marked collectively as defendant's Exhibit 17 with the separate letters marked "A," "B," "C," and "D," respectively.

The witness then testified as follows:

Q. Referring to Defendant's Exhibit Drawing Defendant's Exhibit 2 Apco Absorber, and to a physical Apco absorber, I call your attention to the two horizontal lugs that extend on each side of the depending link which passes through the spring, those lugs being a part of the base on which the spring rests, and ask you to explain in detail the purpose of those lugs. In this connection I would call your attention to a statement made in the affidavit of Mr. Newton on behalf of the plaintiff, that these lugs constitute a guide for the depending link, and ask you whether that is the function of these lugs, and whether they in any manner constitute what might be termed a guide or perform a guiding function for the depending link?

A. These lugs were in no sense intended as a guide for the spring center link and do not act as such. The reason for them being there on the front shock absorber was because of the fact that when the side radius links on the first Apco shock absorbers made by the Apco Manufacturing Company came out there was no opening in that side link so that the perch pin could be inserted without the withdrawing of the radius link pivot bolt and the swinging down of the radius links to clear the perch pin when entered into the shock absorber hanger. Those lugs retained the spring center link in its original position so that after the perch pin was inserted the radius link could be swung back into position. It will be noticed that on the rear shock absorber hangers there are no such lugs at all because there

[fol. 65] was no necessity to swing down the radius links when applying rear shock absorbers to the cars. The fact that the distance between those lugs is much wider than the width of the center link indicates that it has no bearing, and the fact that the surface of those lugs next to the center link is of insignificant area again showing there was no intention of these lugs acting as a bearing. If such a bearing was intended and used I would certainly have made them at least from one to two inches long; but there was no need for them to act as a guide as the shock absorber spring itself is of sufficient stability, together with the control of the radius links, to do all the guiding function.

Q. Are the links which depend from the top of the spring, through the spring, finished along the edges adjacent to those lugs in such a manner as to enable the link to engage the lug as a guide.

A. No; the edges of the center link are left as they come from the drop forging plant, unfinished.

Q. State whether or not the point of juncture of the forging dies, or the seam for the forging runs along the side of the link?

A. Such seam does run along the side of the link.

Q. Does it present a true vertical surface or an irregular surface?

A It presents an irregular surface and a cross section through here would indicate more of a V than a straight line.

Q. You say that it is not necessary to drop the radius links on the rear absorber? Why is this so?

A. Because it is attached in a different manner.

Q. Just how different? Please explain it so that the Court will have a picture of it.

A. In the case of the rear hanger the base is arranged so that it connects to the hub of the Ford axle at a distance [fol. 66] below the radius link at which point the attaching bolt is applied clear of any obstruction.

Q. Is it necessary to disturb the radius links on the rear absorbers to any extent at all in attaching the absorber to the car?

A. No; it is not.

Q. I hand you a chart and ask you what it is.

(The chart referred to is marked for identification Defendant's Exhibit No. 28.)

A. This is a graphic chart plotted from an actual test of a coil testing spring as used on the present Agee shocker. The dotted line A shows the variable load carrying capacity of the Agee shock absorber spring. The full line B represents the constant load per inch carrying capacity of a straight coiled spring. It is noticed that loads taken at intervals of $\frac{1}{2}$ inch up to two inches deflection, and the chart shows that at the beginning—at the end of a quarter of an inch the coils per inch exactly 200 pounds and carried at intervals up to 2 inches deflection so that the last quarter of an inch showed a scale of 400 pounds per inch.

Mr. Tenney: This chart and the question and answer are objected to as being the result of alleged tests which the plaintiff has no means, of course, of testing as to its accuracy or authenticity and that such tests are immaterial, and this result of alleged test is accordingly objected to.

Mr. Keller: Comment reserved for final hearing.

[fol. 67] Q. Please state the circumstances under which this test was made, that is, how it was made, when it was made, and whether the diagram shown is the result of one test or a number of tests, and go to the character of the springs used, and all such detail to show the actual circumstances surrounding the taking and making of the test.

Mr. Tenney: The same objection; it will be understood that this objection applies to all questions and answers and exhibits along this line.

A. We have at the Agee plant a spring testing device, and one coil testing spring was picked out at random and tested according to the deflections given the diagram. This test was made, as recorded here, 1-29-23, and was made by myself.

Mr. Keller:

Q. What is this testing machine you speak of: Is it a standard testing machine for springs?

A. We test, at the Apco plant, all shock absorber springs, and this machine is in operation off and on all the time. This spring testing machine uses a Toledo scale designed and arranged to test Apco shock absorber springs. The machine is fitted with a cam action so that gradually loads can be applied to the spring at any point of deflection. It is also arranged with designed cams for testing at predetermined points.

Q. What spring was used in determining the loads for a straight sided spring as indicated by the line B on the chart Exhibit 10?

A. No special spring was used for those as the straight line indicates graphically the scale per inch of any straight [fol. 68] sided spring. In this case it is shown as a straight sided spring of 450 pounds per inch.

Q. Referring to the instruction sheets which we offered in evidence in the preliminary injunction case, please state who designed or composed those instruction sheets, and, if you know, just how the author set about to arrive at his conclusion?

A. I am the one who wrote up those instruction sheets and just placed myself in the position of any one about to install a set of Apco shock absorbers, and wrote accordingly. The line drawings and illustrations were made by me also.

The witness then testified as follows:

Q. Had you prior to that time, or at any time, seen any instruction sheets by the Texas Electric Motor Company or the K W Ignition Company for use in connection with shock absorbers?

A. No. I had never seen any instruction sheets for Ford shock absorbers previous.

Q. Have you seen any since.

A. Yes.

Q. In your affidavit you spoke of obtaining permission from Mr. Williams of the K W Ignition Company to grant

the Apco Manufacturing Company a license under your Storrie patent which has been referred to in this suit and which is in evidence as Defendant's Exhibit Storrie Patent: will you please state whether or not you gave the K-W Company or Mr. Williams any consideration or paid them any amount for the privilege of extending your license to the Apco Company?

A. No, I never gave the K-W Ignition Company any consideration, monetary or otherwise, for the privilege of granting the Apco Manufacturing Company the license to make shock absorbers.

[fol. 69] Q. Please state whether or not the K-W Ignition Company or Mr. Williams, or any officer or stockholder of that K-W Ignition Company, are interested in your use of the Storrie patent by license or manufacture by you or the Apco Manufacturing Company in any way whatsoever.

A. The interest that the K-W have in that shock absorber patent referred to the use of a guide to enable the spring to operate efficiently and I stipulated in the first case, when they approached me in regard to the matter of manufacturing rights, that they should never use the side link shock absorber without a guide so that I retained absolutely the rights to manufacture shock absorbers using radius links without any guiding element for the operation of the spring.

Q. Has the K-W Ignition Company or Mr. Williams, or any of the officers of the K-W Company, any interest directly or indirectly in your manufacture of the Apco Company manufacture of shock absorbers under your patent, or in any royalties which you receive by virtue of the licensing under your Storrie patent?

A. No; they have no interest whatever.

Q. Did they ever have any interest?

A. No, never.

Q. At any time?

A. At no time.

Q. I hand you a circular which I will have marked for identification Defendant's Exhibit 19, (the circular is so marked) and ask you to identify it, if you can; also one which I will make for identification Defendant's Exhibit 20, (the paper is so marked), and one which I will mark for

identification Defendant's Exhibit 21, (the paper is marked as stated), and ask you to identify them if you can.

[fol. 70] A. Yes; I can identify each of those pieces of literature appertaining to the shock absorbers as being O. K.

Q. Who published Defendant's Exhibit 19?

A. I published it.

Q. And Defendant's Exhibit 20?

A. I published it.

Q. And defendant's Exhibit 21?

A. The Apco Manufacturing Company.

Q. Referring to Defendant's Exhibit 19 and 20, I notice the expression "Apco," and ask you why it appears on the circulars which you published?

A. When this type of shock absorber was produced in 1914 it was arranged through Mr. Wilson of the Auto Parts Company, to put these on the market, and he very willingly allowed me to use the "Apco" trade mark. Shortly after, at the beginning of 1915, competitors' prices on a similar type of shock absorber were reduced so that the Auto Parts could not market these at a profit, buying them from me. They willingly gave up the sale of these absorbers and I took upon myself the responsibility of continuing to market these, and Mr. Wilson of the Auto Parts Company allowed me to continue the use of the Apco Trade mark name because they had been advertised as such previously.

Q. Referring to page 121 of the interference record in evidence in this case as Defendant's Exhibit 16, I read, and call your attention to Q. 79 addressed to Ralph P. Thompson, and his answer thereto, and ask you whether or not you ever wrote to the Temco Electric Motor Company in regard to shock absorbers in 1912 or 1913, or 1914, under the name of Auto Parts Company, or under your own name?

A. No; I have never written to the Temco Electric Motor Company then nor any other time. I have never had any communication with them unless in respect to the letters [fol. 71] already brought in evidence and sent by Mr. Toulmin, Jr.

Q. State whether or not, to your knowledge, Mr. Wilson of the Apco Company, or any other officer of the Apco Com-

pany, ever had a set of the Temco shock absorbers in 1912 or 1913 or 1914.

A. To my knowledge they never had.

Q. Did you ever see any Temco shock absorbers on any of their cars at the office or factory of the Apco Company?

A. No.

Q. Referring to Defendant's Exhibit 21 I find the Expression "Apco coil spring adds 66 more inches" to length of the Ford leaf spring, and ask you to explain just what is meant by that expression "66 more inches" in a technical sense?

A. The idea conveyed here is that the Apco shock absorber spring works in coordination with the Ford leaf spring at all periods of the load so that at any time, with any load, there is always some coils of the Apco spring coordinating with the leaf spring. In this manner there is the idea conveyed that the Ford spring itself is made equivalently longer.

Q. State whether or not you have observed on the streets of Providence, Ford cars having attached thereon Temco shock absorbers within the past year or two?

A. Once in a long while I have seen a set of Temco shock absorbers.

Q. Do you know of any place in Providence where they are sold today?

A. I don't think there is any place in Providence where one could buy a set of Temco shock absorbers.

The connection between the Apco Company shock absorber on the front with the front spring perch is a pivotal [fol. 72] one so that it is possible on an excess of rebounding that the absorber itself will tilt backwards. There is nothing to limit the backward movement other than the length of the connection between the Ford front spring and the radius links of the shock absorbers. The outer covering or dust cover of the original Storrie absorber in no sense acted as a guide for the spring. The inside diameter of the shell was much greater than the base of the absorber allowing a very free passage downards.

The witness then testified that the function of the shell 9 of the Storrie patent is to retain the base of the coil spring

and that such shell has no guiding effect on the spring, if the spring works correctly, that is, vertically up and down.

Cross-examination:

The witness stated that when he started out in business with the shock absorber he first started out under his own name, that he continued to manufacture in his own name from 1914 to the end of 1918, that the William Storrie Company was not an incorporated Company; that he was the only person who had any interest in the shock absorber up to 1918; that the Apco Company had no interest in it until 1918; that Mr. Wilson had no individual interest in the William Storrie Company but that he had business dealings with Mr. Wilson from the time he started until 1918 relative to the shock absorber business. The nature of those business dealings was seeing that the Auto Parts Company originally marketed the shock absorber, it was natural that some orders should continue to come in to the Auto Parts Company, those orders were transferred to me. The Wil-
[fol. 73] liam Storrie Company was financed by myself and Mr. Wilson had nothing to do with it whatever when I started, he never put any money in the William Storrie Company; he had no financial interest in the Company.

The parts for the William Storrie Company were made by the Billings & Spencer Company who made the forgings and the American Steel & Wire Company and Wickwire Spencer Company the springs; the bronze bushings I got from the Hungerford Brass Company and the bolts from the New Haven Screw Company. I assembled these parts at the corner of Point and Eddy Streets of Providence, Rhode Island. The William Storrie Company conducted no other business at that time.

The witness further testified as follows:

C. Q. Did you have any relationship with the defendant in this case during that period?

Ans. As I mentioned before there was a business relationship due to the connection he had between us with the shock absorbers.

C. Q. What became of this William Storrie Company, was it succeeded in business or did it sell out, or what became of it?

Ans. The William Storrie Company naturally went out of business due to competition and the conditions prevailing during the war, and may be the want of a selling organization which I could not keep up.

C. Q. When did this business start again the manufacturing of shock absorbers?

Ans. In 1920, I think.

C. Q. And the business has been running now for something less than four years; is that it?

[fol. 74] Ans. Yes, that is so.

C. Q. Under what name is the business being run now?

Ans. You mean——

C. Q. —the shock absorber business.

Ans. The Apco Manufacturing Company.

C. Q. The defendant in this case?

Ans. Yes, surely.

C. Q. Who owns the Storrie patent, Mr. Storrie?

Ans. The Storrie patent is owned, I believe, by Mr. Keller.

C. Q. That is Mr. Keller who is counsel for the defendant; is that right?

Ans. Yes; that is right.

C. Q. How long has Mr. Keller owned the patent, do you know?

Ans. I do not know how long he has owned the patent.

C. Q. Who owned the patent previous to that time?

Ans. The K-W Ignition Company of Cleveland, Ohio, but with agreements, mutual agreements between the K-W and myself.

C. Q. What was the nature of these agreements, Mr. Storrie.

Ans. Simply that I arranged with them mutually to take up at any future period the manufacture of shock absorbers under the Storrie patent.

C. Q. Go on, explain; that does not give us any answer to that question.

(C. Q. 97 is read.)

Ans. When the K-W Ignition Company took over the patent of the Storrie shock absorber it was taken over be-
[fol. 75] cause of the foreclosing of a mortgage and with

the reservation made by Mr. Williams that I might at any time retain or get again the rights for manufacturing shock absorbers.

C. Q. Now, let me restate the relationship between you and the K-W as I understand it, and see if we can shorten this examination. In the first place, during the time of the interference in which K-W was interested as a party, for a period you turned over the management of the interference to the K-W Company, as I understand it, with their counsel Messrs. Thurston and Kwiss?

Ans. Yes, the management of the interference case was turned over.

C. Q. The K-W Ignition Company paid for the expenses of that interference, did they not?

Ans. They did.

C. Q. And the K-W Ignition Company purchased the interest of your application or prospective patent, did they not, from you?

Ans. No, not at that time.

C. Q. What did they do at that time with you, what arrangement did they make with you then?

Ans. It was simply an interchange of rights should I win the case they would be entitled to make shock absorbers with the side links using the guide to allow the spring to function properly, and they were not under any circumstances to use my dust cover arrangement.

C. Q. Was this agreement in writing?

Ans. It was in writing.

C. Q. Was there any consideration for it other than this mutual exchange?

Ans. Only that they were to conduct the case in my behalf.

C. Q. And pay all the expenses?

[fol. 76] Ans. There was not any compensation——

C. Q. Other than that?

Ans. —passed at that time.

C. Q. Now, Mr. Storrie, will you please produce the agreement between you relative to this exchange?

Mr. Keller: Those agreements are in the K-W record. Counsel for defendant wishes to state on the record that

the agreements are in evidence in the K-W case but Mr. Storrie has no copies of the agreements as defendant's counsel wished to produce those agreements in evidence and found Mr. Storrie did not have copies of them. The defendant's counsel, however, recollects that they were brought into the record in the K-W case, either in the main case or on the accounting, and is willing that the Plaintiff's counsel offer them in evidence at any time that he sees fit.

Mr. Toulmin: That will take care of itself because the K-W record is in this suit.

C. Q. Now, Mr. Storrie, when was it that you received some thousands of dollars from the K-W Ignition Company which you say you received and gave that mortgage upon your patent to secure the K-W Ignition Company?

Ans. I think it was during the fall of 1916 that I received under the mortgage assignment $2,000 from the K-W Ignition Company; that is different from thousands.

C. Q. Was this agreement or mortgage in writing?

Ans. It was.

C. Q. Will you please produce the document?

[fol. 77] Mr. Keller: I think that is also in the K-W case.

Ans. I haven't got it with me.

Mr. Keller: Counsel for defendant promises plaintiff's counsel that if a copy of it is in existence in Mr. Storrie's possession, it will be produced for his inspection within the next week.

Mr. Toulmin: With that understanding at that time it may be offered in evidence?

Mr. Keller: And that it may be offered in evidence.

Mr. Toulmin:

C. Q. How long was the mortgage to run Mr. Storrie, before you had to make payment back to the K-W Company?

Ans. For one year, I believe.

C. Q. When was the mortgage foreclosed and they took over your patent because you couldn't pay?

Ans. 1917, I think.

C. Q. Did you make an assignment of the patent to the K-W Company at that time either before or during that period of the mortgage, or subsequent thereto?

Ans. Well, the mortgage was the consideration, the assignment of this patent.

C. Q. Did the K-W Ignition Company ever return to you that patent?

Ans. Not the patent, but they gave me permission to make shock absorbers; we always had that understanding [fol. 78] between us, that I could get back at a future period the rights to manufacture.

C. Q. Do you mean to get back the patent itself or just the right to manufacture?

Ans. Just the right.

C. Q. Did you ever get the right to manufacture under the patent?

Ans. Yes; I got the right.

C. Q. Did you ever get permission to have the Apco Company manufacture under this Storrie patent owned by the K-W Ignition Company?

Ans. Yes; I went to Cleveland to see about that.

C. Q. And this was a non-inclusive license, was it?

Ans. Yes, a non-inclusive license.

C. Q. And the Apco Manufacturing Company is now manufacturing these shock absorbers under that license; is that it?

Ans. The license was with the understanding that the Apco would get one from me.

C. Q. So that you and the Apco have permission to manufacture under that patent and that permission was given by the K-W Ignition Company; is that right?

Ans. Yes.

C. Q. And the date of the agreement was when?

Ans. That was 1920, I think.

C. Q. Was that agreement in writing?

Ans. No; that was not in writing.

C. Q. What was the consideration for the agreement?

Ans. There was no consideration whatever.

C. Q. How did you know that you would be protected then from attack by the K-W Ignition Company for this patent if you didn't have any writing and you did not have any consideration for it?

[fol. 79] Ans. Simply due to the mutual understanding on the same matter.

C. Q. If you had this understanding, Mr. Storrie, why was it necessary for you to go to Cleveland to get another understanding?

Ans. Well, because the first understanding was for myself personally.

C. Q. And whom did you deal with at Cleveland on behalf of the K-W Ignition Company?

Ans. Mr. Williams.

C. Q. Mr. J. A. Williams?

Ans. Mr. J. A. Williams.

C. Q. President of the Company?

Ans. Yes.

C. Q. And did Mr. Williams let you have this additional right without any consideration at all?

Ans. He did.

C. Q. What did you or the William Storrie Company transfer to the defendant in this case? Did you transfer any physical property, machinery, tools, parts, anything of that sort?

Ans. No, nothing whatever unless the rights to manufacture shock absorbers.

C. Q. Did you transfer the right to use the name?

Ans. You mean the name——

C. Q. The name Apco Company shock absorbers?

Ans. No; I didn't think there was any need to. That was a trade name and always had been.

C. Q. Had the Apco Company been manufacturing any shock absorbers, to your knowledge, prior to the time they reengaged in the business in 1920?

Ans. No.

C. Q. Had they done any work on shock absorbers, or parts therefor, between the years 1914 and 1920, to your knowledge?

[fol. 80] Ans. Yes.

C. Q. So they only came into the field of manufacture of shock absorbers in 1920, some four years ago; is that it?

Ans. That is right.

C. Q. Are you with the Apco Company now?

Ans. I am with the Apco Company in so far as I develop my own items and allow the Apco Company to manufacture them on a royalty basis.

C. Q. How long have you been engaged in with them on this basis?

Ans. Since 1920.

C. Q. That is from the time when you gave up your own business and the Apco Company undertook to manufacture the shock absorbers; is that right?

Ans. Yes.

C. Q. What royalty did you get from the Apco Company from those shock absorbers?

Mr. Keller: Objected to as being a matter that is a privileged matter, and the witness is instructed that he need not answer the question unless he wishes to do so.

Ans. I don't think it is necessary for me to answer that question.

Mr. Toulmin:

C. Q. It is not a question of what you think is necessary, if you decline to answer I will ask the Court to make you answer.

Ans. Well, I decline to answer.

Mr. Toulmin: Notice is given on the record that we will move to have this question answered or the alternative is [fol. 81] to have the entire deposition struck from the record due to the failure of the witness to answer this question.

Mr. Hall: Comment reserved for final hearing.

Mr. Toulmin:

C. Q. Have you any agreement with Mr. Keller for the purchase of this Storrie patent?

Ans. No agreement at all.

C. Q. No understanding on the subject?

Ans. No understanding.

The spring marked 6 on the copy of defendant's Exhibit 2 is a coil spring.

The purpose of having this radius link in this illustration before me, Defendant's Exhibit No. 2, is to do away with the idea or practical use of guides for having the spring guided throughout its functioning distance. Should the radius links be done away with, the lower end of the depending link passing through the spring when deflected would have to have some controlling elements to keep it in a vertical position seeing that we have no guiding elements other than the spring itself, I refer to the coil spring, to maintain true position, so I incorporated and designed the radius links. It controls rather than guides the hanger marked 5 on the Defendant's Exhibit 2; when you refer to a guide you also refer to the other element which the guide slides on in which case there is no sliding element for the guide, so that we have no guide.

In Exhibit 2 the spring and radius links retain the spring center link 5 in a vertical position when it moves down from the position shown. If the center link was in mid-position [fol. 82] the spring and radius links would control the position of the center link 5 on the upward movement.

The center link 5 is connected to a cap which rests on top of 6. The radius links are pivotal on stanchion 2. The purpose of the spring hanger 2, or as has been stated the stanchion, but I use more advisedly spring hanger is to support and act as a base for the coil spring 6. The witness then testified as follows:

C. Q. And this stanchion or coil spring support is mounted upon the Ford axle?

Ans. No; this spring support is not mounted on the Ford axle.

C. Q. Where is it mounted?

Ans. On the spring perch.

C. Q. And the perch mounted on the axle?

Ans. And the perch is mounted on the axle.

C. Q. So that the net result is the same, is it not? The axle supports the structure.

Ans. No; I would not say so.

C. Q. Where is the difference?

Ans. Because the spring hanger is pivotal on the spring perch which goes through the axle.

C. Q. Now, Mr. Storrie, whether you claim it is pivoted or whether it is all one piece the result still remains that

the axle supports the structure, does it not, whether it supports by being fastened together or pivoted?

Ans. The axle does support the structure, there is no question at all.

C. Q. Now, the leaf spring is connected to this vertical moving member No. 5, is it not?

Ans. The leaf spring is connected with the radius links No. 9 to which is also attached the spring center link No. 5. [fol. 83] C. Q. Mr. Storrie, in your patent you refer to the action of this coil spring as neutralizing the action of the main spring or leaf spring; what did you mean by that?

Ans. That was evidently meant to act as a shock absorbing medium so that the shocks would not go through the leaf spring, to a certain extent.

C. Q. You mean the coil spring was to be used as a shock absorbing medium?

Ans. Yes.

C. Q. What was the relationship of the coil spring to the leaf spring in this combination?

Ans. The relationship was such that shocks would be neutralized by the coil spring before they would go on to the leaf spring in this arrangement of parts.

C. Q. Why did you not use another leaf spring instead of a coil spring, Mr. Storrie?

Ans. Because another leaf spring would have to be of considerable length to be equivalent to the coil spring.

C. Q. So far as you know, are you aware of the fact that there is a difference mechanically characteristic in the coil spring from that of the leaf spring.

Ans. So far as the capacity of the leaf spring goes to absorb a shock in relation to its deflection.

C. Q. It is true, is it not, that the coil spring has different mechanical characteristics from the leaf spring? That is well known in mechanics, is it not?

Ans. Yes.

C. Q. It has a quicker shock absorbing property if it is designed and installed so that it can work properly?

Ans. Yes.

C. Q. The coil spring so-called amongst mechanics is a quick active spring, is it not? While the leaf spring is so-called slow in acting?

Ans. That is generally accepted, yes.

[Ext. 82] C. Q. And the periods of vibration of the two springs are different for the reason that one is quick acting and the other is slow acting; that is right, is it not?

Ans. That is right to some extent.

C. Q. Where is it wrong?

Ans. Because the period of vibration when the arrangement is put on the Ford car is not so very quick.

C. Q. I am not referring to the Ford car now; I am asking you about the characteristics of the two springs. One is quick acting and the other is slow acting; that is correct, is it not, in mechanics?

Ans. Yes, that is right.

C. Q. Now, referring to Defendant's Exhibit No. 1 which is in this case, you also have there the quick acting coil spring radius links and vertical member and stanchion, do you not?

Ans. What do you mean by "vertical member"?

C. Q. Well, the member that rests on top of the spring, the coil spring which is marked 5 in the other drawing—there is as much here—sometimes called the hanger or pin?

Ans. In this case, in Exhibit 1, the member has a connecting link, the other parts are as stated.

C. Q. Now, do you mean to say that this vertical member has a different function and a different action from that in Defendant's Exhibit No. 2?

Ans. I don't know that I have stated that there is a difference.

C. Q. Just right now; is there any difference between the two of them in the net result?

Ans. The net results of Defendant's Exhibit No. 1 and Defendant's Exhibit No. 2 are the same.

C. Q. This morning you went at a great length into discussing the coil spring which is formed like a bushing as was used by the Apex Company; did I understand you to [Ext. 83] infer from that discussion, or state that the Apex situation as was made with a bushing coil spring, is supposed by you as being outside the Stacey patent?

Ans. No, I should not say so.

C. Q. Then you believe, whether it is the coil bushing spring or vertical coil spring, the Apex situation is still within the Stacey patent; is that right?

Ans. Still within but the low-hive type of spring has got the characteristics which the straight-sided coil spring has not got.

Q. And you believe the low-hive coil is an improvement over the vertical straight-sided spring?

Ans. I do believe it is.

Q. But both of them are coil springs, are they not?

Ans. Both of them are coil springs.

Q. You regard both of them as coming within the Stevens patent; is that right?

Ans. Yes; that is right.

Q. Now, coming back to this statement in your own patent, will you tell us again—I don't think you answered the question clearly—what you mean by the word "centralize" as used in your patent? I hand you the patent so that you can read what I am referring to—in the first column on the first page?

Ans. The term "centralize" is—evidently meant the same as elsewhere.

Q. Then the idea was that the combination of the leaf and the coil spring together would, as mentioned say, dampen the shock or eliminate the shock; that is the problem you were solving?

Ans. Yes, that is so.

Q. Mr. Stevens, if we took the Apex absorber and removed the serrated radius links would the absorber work?

[Not so.] Ans. No; it would not. It would not work efficiently.

Q. What would happen if you took them off?

Ans. Why, the side sway would develop, that is, the front of the truck car would soon be unmanageable, the steering would be objectionable.

Q. What would happen to the wear of the car?

Ans. If we took them off the front?

Q. If you took them off the rear too?

Ans. Well, the same thing would apply.

Q. Then it is necessary to have something to make this hanger bolt 3 work up and down in a substantial vertical line, is it not?

Ans. In an efficiently substantial vertical line, yes.

Q. And efficiently of course, would depend upon how well designed your apparatus was; it is necessary to have

something like that to make that hanger move up and down in substantially a straight line?

Ans. I think it is.

C. Q. Now, in the Apco construction it is true, is it not, there may be some variation out of the straight line of this hanger bolt 5 due to the fact this lower end travels in a slight arc?

Ans. I don't think that amounts to anything.

C. Q. It is substantially vertical?

Ans. Yes.

C. Q. I understand you to say—this morning—that there was a clearance between the casing 14 shown in the Storrie patent, and the spring support 2 or the stanchion as it is sometimes called?

Ans. Yes; practically there is and was.

C. Q. A clearance.

Ans. A clearance.

C. Q. Between that casing, casing and the stanchion and support?

[fol. 87] Ans. Spring support.

C. Q. You mean the coil spring support?

Ans. Yes.

C. Q. Referring to page 5 of Exhibit No. 19, showing the Apco absorber, there is also a clearance between the casing 9 and the coil spring support or stanchion 2; is that correct?

Ans. That is correct.

C. Q. And referring to Fig. 3 of the patent in suit, Thompson, there is a clearance between the coil spring support and the member C is there not?

Ans. There is, sure, on this drawing.

C. Q. Mr. Storrie, do you believe there is any difference between pushing down the coil spring by having the hanger run down through the center and by having the hanger go over the outside, the spring in both cases on top, the hanger being on top of the spring?

Ans. It all depends on where the point of application of the load comes.

C. Q. If the load is applied on the top of the coil spring in both instances would there be any difference in the action of the coil spring?

Ans. If the load is directly applied in the center of the coil spring there is no difference.

C. Q. Now, if the load is engaged around a margin of the top of that spring, as in the Apco device now made would there be any difference? Would that modify your answer?

Ans. If the load is applied centrally through the middle of the spring and contact is made at the diameter of the coil at top there would be no difference; the same thing applies.

C. Q. I thought you would agree with me on the proposition in the present Apco device as well as in the one which preceded it which you were manufacturing in 1914—1915 [fol. 88] you placed the weight upon the coil spring by putting some sort of cap member on top of the coil; that is correct, is it not?

Ans. That is correct.

C. Q. This cap was a disc like member, was it not?

Ans. It was circular.

C. Q. And it has a disc like member in the present Apco?

Ans. Yes.

C. Q. Resting upon the top of these coils?

Ans. Yes, sir.

C. Q. Now, will you be good enough to refer to the Thompson patent and tell me whether you find a disc like member resting on top of the coils in that patent?

Ans. There is a disc like member H resting on top of the coils but in the Thompson patent this disc like member is extended for a considerable distance down the upright stanchion thereby acting as a guide.

C. Q. Now, referring to Exhibit No. 19, page 5, your disc like member in that particular embodiment also extends down a distance within the coil, does it not? I refer to the cap member 8.

Ans. In the Apco Exhibit 19, page 5, the disc like cap No. 8 is threaded on the vertical spring center link 7 and moves with the center link 7 whereas in the Thompson patent the circular cap H does not move with the upright stanchion D but slides thereon; this is different.

C. Q. It is true, is it not, Mr. Storrie, that this No. 8 does extend down within the coil spring? You will observe the shoulder that extends down.

Ans. Cap 8 in the case of Exhibit 19, page 5, is recessed about ⅛ of an inch to receive the end of the coil of spring 3. [fol. 89] C. Q. And does extend within the coil spring to that extent?

Ans. To the extent of 1/8 of an inch, more or less.

As to the present Apco construction shown in Defendant's Exhibit No. 2 having a stanchion or spring support, a coil spring, a vertical moving pin and a radius link, the witness objects to the word "stanchion" but uses "spring hanger," and then you have the spring hanger, radius link, center links and coil spring. The coil spring hanger is defendant's Exhibit No. 2 is marked 2. Asked the name of the vertical link the witness said on spring link 5. The coil spring is 6.

The shock absorber in which the coil spring is of the straight wall type is not an inoperative shock absorber, if it has all the elements that go and are designed correctly to make the shock absorber work in harmony. If we go to extremes and make a straight coil spring of the smallest possible diameter and extremely long, with radius link operation, that shock absorber would practically be inoperative; whereas, if you make a shock absorber with a straight sided spring with the base, or with the coils of a large diameter, that type of shock absorber would be operative to a very large degree. My reason for saying this is that there is an angular pressure brought to bear on top of the spring which tends to tilt the spring over and if the base is not sufficiently large to resist that the spring will tilt, and in operation on the car that becomes a backward and forward movement. If you don't have your spring designed correctly with the side link elements you have a very inferior operative shock absorber. The straight sided spring shown in the Storrie patent is an operative structure because the diameter of that spring is such that is resists to a large extent the angular pressure brought to bear at [fol. 90] the top. It is a question of degree of size, to some extent. The effectiveness of the shock absorber depends entirely upon the design. The design will include the proper dimensioning of the spring and other parts. In reference to the question asked of whether my original Storrie shock absorber was operative or not I should say

that the outstanding features which makes it operative is that the load comes directly through the center of the spring, on the same center line as the spring, and not applied at some distance from its own common center. In the latter case it is very obvious—when I say "obvious" I mean there is to the lay mind, without any possible, probably shadow of doubt whatever, that there would be a tilting action brought to bear on the casing where the point of load is applied outside its own center. The witness stated that he had seen Halladay's two absorbers which were defective. They had a spring base and a coil spring and a plunger going through the center of the base and bearing the spring base at the bottom of the spring, and at the end of the plunger was an eye through which the spring shackles of a Ford car were connected outside the spring and connected to the spring base was a shell. I have seen many of those with the shells removed due to the fact that the action on the plunger was not vertical, causing that plunger to tilt backwards and forwards. This was amplified by the side sway of the car with the result that the shell covers were knocked off. The witness then further testified as follows:

C. Q. What were they knocked off by?

Ans. By the plunger or spring surrounding the plunger.

C. Q. They were not knocked off by the parts of the car itself then?

[fol. 91] Ans. In this case that was not so prominent as the ineffective design of the shock absorber.

C. Q. Did you actually see any of those knocked off, yourself?

Ans. I never saw one in the act of falling off.

C. Q. You only deduce this from seeing the shock absorbers afterwards?

Ans. And seeing them on the road with the shells removed.

C. Q. When you saw them on the road the shells were already gone at that time?

Ans. Yes; those shells, in my opinion, did not remain on those shock absorbers for more than two weeks at a time.

C. Q. Do you know that or is that just an opinion on your part? Did you actually time the thing? Have you got any definite information?

Ans. No; that is deduction from my experience.

C. Q. Then your position is the Apco of which you are the designer is the only successful shock absorber; is that it?

Ans. No; I would not say that.

C. Q. What others are there that are successful besides yours?

Ans. Well, that is a question about the degree of successfulness.

C. Q. Now, let me ask you this question, your position is that the Apco is successful; is that right?

Ans. Yes.

C. Q. Is the Temco a successful shock absorber?

Ans. Which shock absorber do you refer to?

C. Q. 236. You have been claiming to know a lot about the Temco and have testified here today all about them; [fol. 92] what I want to know is, in your opinion as the designer of the successful Apco, whether the Temco is a successful shock absorber?

Ans. In my opinion no type of the Temco shock absorber was successful as I see it.

C. Q. 237. Was any of the Halliday shock absorbers ever successful?

Ans. Not in my opinion.

C. Q. 238. Were any of the K-W's ever successful?

Ans. So long as the casing remained intact guiding the spring action I should say they were successful.

C. Q. 239. But you say that the casing did not remain very long, did you not? It was soon knocked off.

Ans. I don't say that in reference to the K-W; that was in reference to the Halliday.

C. Q. 240. You testified this morning that the K-W were knocked off and were defective shock absorbers?

Ans. I testified that I had seen a K-W absorber with the shell off.

C. Q. 241. So that as far as you know then the K-W's were successful with the one exception that you have mentioned; is that right?

Ans. That should not be deduced from what I said because my observation only brought into view one K-W shock absorber.

C. Q. 242. So as to all the other K-W's shock absorbers you do not know anything about it then?

Ans. I know as far as my experience goes in designing shock absorbers if the casing remains intact, that it would be a successful shock absorber.

[fol. 93] C. Q. 243. So that then we can put the K-W in second place, if the Apco is a successful shock absorber, can you do that, so far as your experience goes?

Ans. I would not guarantee to place the successful shock absorbers in any degree that might be absolutely correct.

C. Q. 244. Now, just answer my question, that is not a definite answer; next to Apco's I understand that, so far as your experience goes, you believe the K-W to be a successful shock absorber so far as design is concerned?

Ans. Yes; if the design remains intact. I think it was better than the Temco.

C. Q. 245. And was a successful shock absorber?

Ans. And was a successful shock absorber.

C. Q. 246. The K-W had a straight-sided spring, didn't it?

Ans. It did.

C. Q. 247. And the K-W had the radius link?

Ans. It did, but that spring was guided.

C. Q. 248. I asked you, did it have the radius link?

Ans. It had the radius link.

C. Q. 249. I notice in the letter introduced this morning, being Defendant's Exhibit 17-B, that it is stamped March 20, 1916, with the mail stamp of Thurston & Kwiss who at that time were counsel for the K-W Ignition Company; why was this letter submitted to Thurston & Kwiss as representatives of the K-W Ignition Company?

[fol. 94] Ans. Because I consider these letters had an application to affect the interference records.

C. Q. 250. And you were directed by these counsel for the K-W Ignition Company as to the course of handling these letters, were you not?

Ans. Well, to what extent?

C. Q. 251. What instructions, or what communication did you have with Thurston & Kwiss on the subject of these letters?

Ans. These letters were sent on to Thurston & Kwiss on my own initiative.

C. Q. 252. What was the reply you got from them?

Ans. I don't think I got any reply.

C. Q. 253. Will you look in your records and produce any replies you got from Thurston & Kwiss on this subject?

Ans. I will if I can find them.

C. Q. 254. Will you report here tomorrow morning with the letters from Thurston & Kwiss on this subject?

Ans. If I can find such letters.

C. Q. 255. Will you also produce all letters on this point from the K-W Ignition Company? Will you also do that?

Ans. I will see if I can find any.

Referring to the chart of the spring test, the witness said that he made no test on the straight sided spring, that the straight line on the chart is the theoretical line of departure. [fol. 95] The instruction sheets for the present Apco shock absorbers were prepared about the time they were ready for the marker in 1920 and those instruction sheets were practically a rewrite of the ones which the witness originally wrote for the old Storrie shock absorbers in 1914. That the witness never tried out any Temco shock absorbers of any form at any time, that they were never on any car belonging to him, and that he has no personal knowledge of their action.

Redirect examination:

Q. 264. In one of your answers you stated that the net result of the structures of Defendant's Exhibits 1 and 2, which is the straight-sided spring on the Storrie shock absorber and the conical spring shock absorber are the same; what did you mean by that?

Ans. That may be taken generally but as I have previously testified the bee-hive type of spring has got characteristics which have already been gone into, and it also resists the angular pressure brought to bear at the top of the spring. In the old Storrie absorber the resistance to angular pressure was not so great as it would be in the bee-hive type, to this extent that being of a base of smaller diameter there was to a small degree a tendency for the spring to buckle. If the spring should be a weak-sided spring, that is to say, with the top coil unduly weak, there would be more of a tilting action and sometimes this fact was brought to my knowledge by the outside casing being reported as noisy.

Q. 265. I refer you to Fig. 3 of the Thompson patent in suit and call your attention to the upstanding stanchion or rod D and the casing or hanger C, also the base or washer F and the coil spring G; if the coil spring G in the Thompson [fol. 96] patent in suit were removed from the shock absorber would the stanchion D still guide the spring casing or hanger C and its vertical movement? By using the word "guide" I am now imputing to the Thompson patent a function of operativeness by disregarding the side thrust for angular pressure which may be exerted by the spring on the shell of the absorber.

A. That is a question. The angular pressure brought to bear on the casing would be reacted on the stanchion D and if that angular pressure was great enough the casing C would stick.

Q. 266. But I have said that we will except that angular pressure from consideration of the question so that if we take the spring out of the absorber, as disclosed in the Thompson patent, would it still be possible to move the shell up and down the stanchion D disregarding any connection of the leaf spring with the absorber?

A. I think it would.

Q. 267. Referring to the alleged Apco, infringing Apco shock absorber, defendant's Exhibit 2; if the spring, the conical spring were removed from the shock absorber would the link 5 have anything to cause it to remain in a vertical position?

A. There would be nothing left to support the spring center link in a vertical position.

In the Thompson patent, the construction of the Thompson patent in suit as disclosed in the drawings, by removing the spring you do not affect the guiding action of the absorber, but in the Apco absorber if you remove the conical spring you do affect the function of the spring link.

[fol. 97] That the stability due to the form of the spring itself remains the spring center link in a vertical position.

If you remove the spring of the Apco absorber the depending spring link which passes through the coil spring would have no support but would be free to move laterally or oscillate about the pivotal point where it is joined to the forward end of the radius link.

In the Apco absorber the depending spring link is provided with a cross pin at the top.

Asked if that pin permits a pivotal movement of the spring link, the vertical spring link at the top of the spring when any movement, vertical movement, is imparted to the spring link by the operation of the shock absorber, the witness said:

There is a pivotal movement of that pin at the top. This pivotal movement relieves the coil spring from a buckling action which might be there if the center link was fixed to the cap on top of the spring.

This cap on top of the spring is provided with a large opening which receives the eye or top end of the vertical spring link, and this eye rests in the cap supported by the little cross pin without otherwise being fastened to the cap which rests on top of the coil spring.

Now keeping in mind the pivotal construction on the top of the vertical link and the pivotal construction at the bottom of the vertical link, when the coil spring is depressed by pressure applied at the radius link the tendency of the lower end of the vertical link is to move downwardly on an arc the radius of which is the opposite end of the pivotal point of the radius link.

At the bottom of the shock absorber, at the point where the vertical link passes through the base or base plate of [fol. 98] the absorber there is a clearance to permit of this lateral travel of the lower end of the vertical link.

The small cap which rests on the top of the bee-hive spring simply fits in easily and is not directly connected. It simply rests on top of the coil spring.

The witness then testified as follows:

Q. 277. I call your attention to the illustration of the K-W absorber comprising Defendant's Exhibit 4 in the preliminary injunction record and ask you whether or not with that type of apparatus, if you remove the coil spring G in the K-W device the other parts would still reciprocate or be guided by one another and not be displaced?

Ans. In that case if the spring was removed the parts would retain the same positions.

Q. 278. And in that respect is the K-W device of Defendant's Exhibit 4 of the Thompson patent, the structure of the Thompson patent as disclosed in the patent, the same,

taking into consideration the casing K which is indicated as the stanchion in the complainant's chart of Exhibit 9?

Ans. They are the same in that respect.

Q. 279. Referring again to the K-W shock absorber as shown on Exhibit 4, complainant's chart, and assuming the presence of the casing K as a guide for the plunger J, would it seem possible to use a spring of any diameter that would fit within the shell provided the spring was cross section that would support the proper loading of the car or the weight of the vehicle and have its shock absorbing qualities?

Ans. No; I don't think it matters in that construction.

[fol. 99] Q. 280. If you remove the shell, move the casing K in the K-W shock absorber what would remain to prevent this tilting action of the spring G under loading of the shock absorber?

Ans. There would be nothing left other than the base of the spring to resist that tilting action, and in the case of the K-W this relatively small diameter. so that there would be, in my opinion, a tilting action of the spring with the casing removed, and that action would become a backward and forward movement while the car was in operation and also a buckling of the spring.

Recross-examination:

C. Q. 281. Referring to the Thompson patent, is it not true that there is a clearance between the disc F and the casing C?

Ans. It is true as shown by this drawing.

C. Q. 282. And would it not be possible for this casing C to be rocked if the spring were absent; is that your position?

Ans. If the spring were absent and no angular pressure the shell would be guided absolutely in its general movement by the stanchion D.

C. Q. 283. Yes; but the connection is to the leaf spring, is to one side?

Ans. That is so.

C. Q. 284. And therefore, as I understand you, there would be a displacement of this casing if the spring were absent?

Ans. There would, due to the load being applied off center.

[fol. 100] C. Q. 285. Now, in the Apco device and in the K-W device and in the Storrie device the vertical hanger rod which we have marked 5 in one of these drawings is guided in its vertical path by the radius link you have testified?

Ans. It is guided by the rigidity of the coil spring.

C. Q. 286. And the lower end is guided by the lower end of the radius link, is it not?

Ans. Yes.

C. Q. 287. So that we do have, at least, one end of the link, according to your statement, guided by the radius link, don't we?

Ans. Controlled by the radius link.

C. Q. 288. The control determines the path through which one end shall travel, does it not?

Ans. Yes; that is the better way to put it.

C. Q. 289. Now, what is the reason for having the upper end of the Apco absorber pivoted with respect to the spring and the vertical member 5?

Ans. So as to relieve the coil spring from any degree of a tendency to buckle due to the difference in a small arc made by the radius link and its downward movement.

C. Q. 290. So that in the Storrie construction which does not have this pivotal connection with the spring you must rely upon the guiding of the casing, according to your theory.

Ans. No, not at all, because there is a limit to this buckling action and in the case of the Storrie patent this is of a very small degree and it in no wise interferes with the operation of the coil spring or its dependency on any guiding [fol. 101] element for its efficient functioning.

C. Q. 291. Let me see if I understand you, Mr. Storrie; in the Storrie patent the spring is so designed that you do not need the pivotal action between pin 5 and coil spring 11, as I understand it?

Ans. I would say that it would be an improved design if it did have a pivotal action on top of the spring.

C. Q. 292. I did not ask you if it did; I am assuming that it has not, and the reason for its not being necessary in the Storrie construction shown in the Storrie patent is the fact that you have designed the spring properly so that the buckling action will not be serious; is that correct?

Ans. That is correct.

C. Q. 283. Now in the Apco construction shown in the Defendant's Exhibit 2 you have taken the precaution to put in a pivotal connection between the spring and the vertical member 5 in order to secure the same result of substantially no buckling as you get in the Stoerio patent; that is correct, is it not?

Ans. In the case of the old Stoerio patent there is to a very small degree a buckling action of the spring which does not in any way interfere with its effective operation.

(C. Q. 283 is read.)

I do not recollect saying there was no buckling in the old Stoerio patent, and in the Apco shock absorber I have taken the precaution, all the precaution I know of, to make it efficient 100 per cent so far as my previous experience went.

[fol. 102] C. Q. 284. Now, Mr. Stoerio, in the Stoerio patent the buckling was not serious enough to be of any consequence, as I understand it?

Ans. That is correct.

C. Q. 285. In the Apco construction with the bow-bow spring you have eliminated any chance of buckling, according to your theory, by putting in a pivotal action between the vertical pin and the bow-bow spring?

Ans. Yes; that is correct.

C. Q. 286. So that the net result in the end, whether it is from the Stoerio patent construction or from the Apco construction was, to practically the same, is it not, or is it different?

Ans. It is different to a degree in that it lengthens the life of a coil spring by removing from the body of that spring any torsional strain.

C. Q. 287. But for practical purposes the net result to the car and the passenger during the operation of these two structures will be the same?

Ans. If you wish to speak generally I would say yes.

C. Q. 288. Is it your position that the K. W. absorber, such as shown in Defendant's Exhibit No. 4, would not work, would not be operative and successful without the casing K?

Ans. It would be very inferior construction indeed without the casing.

Q. 299. So that from your point of view the casing C is absolutely essential to make the K. W construction work?

Ans. I think so.

(Ext. 661) Q. 300. What difference in action would there be between your Agra construction and the K. W construction Defendant's Exhibit No. 5, shown in Exhibit No. 6, if the K. W did not have the casing C?

Ans. As I previously testified, in the K. W case the coil spring was of such a small diameter in relation to its height that if the casing K were removed the angular of pressure brought to bear at the top of the spring would cause a lifting action which would buckle the spring and effect a very inferior operative mechanism.

Q. 301. Is this your theoretical opinion or have you actually tried this in practice?

Ans. It is my theoretical opinion backed up by practical demonstration as I have once made a check absorber without the casing.

Q. 302. Have you the check absorber that is shown with the casing of the K. W capacity?

Ans. It worked in a very limited extent.

Q. 303. Is your present check you have experience with it?

Ans. By observing it.

Q. 304. In operation?

Ans. In operation.

Q. 305. Have you ever had the absorber load the spring out of it?

Ans. I don't get that.

Q. 306. In your former check did you find K. W absorber ever took your coil entirely the casing?

(Ext. 662) Ans. I do not know how else it was because I did not happen of the nature of the car have long to load load these absorbers as that this was to attend I was about of 1911 at the beginning of 1912.

Q. 307. Were the springs broken or it?

Ans. The the springs were intact.

Q. 308. What was the cause of the removal of the Ford car with load these springs?

Ans. I do not know.

Q. 309. Was he located in Providence?

Ans. It was a Rhode Island registration; I simply made the observation and that was all there was to it.

C. Q. 180. Did you see the car when it was running?

Ans. I did.

C. Q. 181. Did you see it when it was standing still?

Ans. No; I did not.

C. Q. 182. Did you examine the automobile to see if the rest of the automobile had parts in proper relationship?

Ans. No.

C. Q. 183. Did you examine the automobile to see if the leaf springs were in proper position?

Ans. No; it was simply observation.

C. Q. 184. Are you aware of the fact that the Court of Appeals in the Sixth Circuit Court has already held that the casing on this K-W construction makes no difference in operation?

[Tr. 106] Mr. Collins: Defendant counsel states that is a matter that is disputed and it will not be conceded by the defendant.

Mr. Tremblin: I am asking the witness to answer not counsel.

C. Q. 185. What is your knowledge Mr. Stevens?

Ans. No; I am not aware of that.

Mr. Collins:

Q. 186. Reference has been made to a buckling action in the original Stevens device as shown in the Stevens patent please state whether or not this was an actual buckling of the springs or was a tendency to buckle?

Ans. I should say it was a buckling to a very small degree practically amounting to little more than a tendency to buckle although on the first cause which gave rise the old Stevens shock absorber would not have continued very long in effect.

Q. 187. And please state the characteristic of the spring that resulted in causing or making the tendency to buckle in the original Stevens patent?

Ans. The resistance to this buckling action in the original Stevens patent was brought about by the large diameter of the base of the spring.

Q. 318. Now, Mr. Storrie, Plaintiff's counsel referred to the loose fit between the washer F and the casing C of the Thompson patent in suit; please state whether or not as you read the Thompson patent—and I call your attention to lines 55 to, say, 68 of the first page of the specifications of the Thompson patent—the fit between this washer and casing must be a bearing fit in the intention of the patentee?

[fol. 106] Ans. Although there is a clearance shown between the collar F and the sleeve C this in my opinion is theoretical and I do not think it possible that this distance can be maintained, particularly when a load is applied off center, so that in operation this collar F is in contact with sleeve C and acts as a guide at the bottom thereof.

DEPOSITION OF CHESTER A. PIERCE

CHESTER A. PIERCE, witness on behalf of defendant, testified as follows on direct examination:

That he is 43 years of age, an automobile repair man for 25 years having been in business for himself for 15 years in Providence and Pawtucket; that his business comprises repairing and the sale of accessory parts and painting up to within the last few months. That he is pretty well acquainted with the construction of the Ford car, that he is an authorized agent for Ford cars and is acquainted with the spring construction of such cars. That he knows how the springs are mounted on Ford cars and is acquainted generally with the accessory field and knows where the different accessories go on Ford cars and his knowledge in this respect extends over the period of 15 years; that he has had a full line of accessories whatever they may have been, everything pertaining to the Ford car and there are very few accessories that he has not handled and applied on Ford cars, that his application of accessories to Ford car was extensive. That he is acquainted with the different makes of shock absorbers for Ford cars over the period of 15 years and that he recalls the names of such shock absorbers as Halladay, K-W, Temco, Apco, Thompson, Hoosier, E-Z, Float-A-Ford, and numerous others that he

[fol. 107] could not recall at just that minute; that the general characteristics of these absorbers were spring action, and they very generally used a coil spring. That he is acquainted with the construction of the Temco and the K-W absorbers and has applied many of them on Ford cars from I should say 1912 to 1916, along in that period, that he has not applied any of them on cars lately.

The witness then testified as follows:

Q. 32. Have you ever seen any Temco absorbers round lately?

Ans. I have some in the plant at the present time that I have taken off for them.

Q. 33. I mean, have you seen any Temco shock absorbers?

Ans. Oh, no; no.

Q. 34. Do you know whether they are handled in Providence?

Ans. I never see or hear of them at all.

Q. 35. Do you know whether they are manufactured?

Ans. I do not.

Q. 36. Are you pretty well acquainted with the accessory houses in or about Providence?

Ans. Yes.

Q. 37. As a general thing when an article is on the market are you acquainted with the fact?

Ans. I am.

[fol. 108] Q. 38. Do you know whether or not the Temco Company made more than one form of shock absorbers for Ford cars?

Ans. They made two to my knowledge.

Q. 39. Do you know what the first one was?

Ans. Yes.

Q. 40. Can you describe it generally?

Ans. Well, the first one was—what do you mean? Do you want me to go into details?

Q. 41. To give us some idea of it.

Ans. Well, it hung from a bracket, a bolt run up through the center with a spring around it, with the shell over the outside, a nut on the top to hold the shell on. The second was a telescope type.

Q. 42. Did you apply both these types to cars?

Ans. Oh, yes.

Q. 43. Did you ever experience any difficulty or have complaints from parties who had used these Temco shock absorbers or K-W absorbers?

Ans. We had a lot of trouble with the first type particularly.

Q. 44. In what respect?

Ans. Well, they used—the car would go over a bumper, for instance, the fender brackets would come down, rap on the top of the case, dent the cap in, and have a tendency to bend the bolt, throw it out of line, make it crampsel, one thing and another.

Q. 45. To your knowledge—did you have actual knowledge in contact with cars where this condition obtained?

[fol. 109] Ans. Oh, yes indeed; I put on a great many sets of those, and took them off, I put on a great many sets of both types for that matter.

Q. 46. For customers?

Ans. Oh, yes.

Q. 47. What would be the effect of the fender rod, mudguard rod, pounding on the shock absorber and bending the cap or rod, what effect would that have on the absorber?

Ans. It took the action of the absorber away. It would bend that bolt so that it would have a tendency to strain to one side and rub on the cap, and the cap would be dented in on the top where the rod would hit it and throw it out of line, in other words.

Q. 48. Was that a condition that could have been remedied, say by good substantial lubrication?

Ans. Oh, no; lubrication had nothing to do with that.

Q. 49. Why not?

Ans. Because it was bent and thrown out of line.

Q. 50. You say you took the absorbers off; would you send those absorbers back to the factory?

Ans. I never did send any back.

Q. 51. Why not?

Ans. I junked them. I didn't imagine there was any chance of getting redress at all so I took them off and put some other kind of shock absorbers on.

Q. 52. In your experience with Ford drivers when the shock absorber did not work properly would they come in immediately, have you take them off?

[fol. 110] Ans. Those things were left to me a great deal, in my particular class of trade they would come in and

ask what was the matter, what was the reason for those different things. I would find these conditions, just find that the shock absorber was not working right, something wrong, and I would take it off, put something else on.

Q. 53. On this, what you call the second Temco absorber, that had a shell on it too?

Ans. Yes.

Q. 54. How did that work?

Ans. On the telescope there was a cup shaped casting on the bottom of that shock absorber that the spring rested in, then there was a bolt came up through the cup and all, so that the cup telescoped down over the bottom half and that cup—that cup acted as a guide over that cup.

Q. 55. Where was the coil spring with respect to that cup?

Ans. It rested with the cup.

Q. 56. Did you ever see any shock absorbers of the second Temco type that did not work properly?

Ans. We had once a lot of trouble with those.

Q. 57. For what reason?

Ans. Rattling, principally; they made so much noise we could not keep them on the cars.

Q. 60. What would rattle?

Ans. This cup acting as a guide over the cup there was quite a strain on the side of them which would tend to wear [fol. 111] and as it would wear it would rattle. The tendency of the spring was to flip back and forth all the time, and that being solid with the cup made the sides of the cup as it came down over the cup rattle. It was a case of rattling back and forth on the cup all the time and we could not stand it; we couldn't keep them on there.

Q. 61. Would the fact that the spring was seated in a cup effect that?

Ans. No, because there was not guide enough in the bolt. That bolt just came up from the—from this piece of stock on the bottom of that cup and the tendency of the spring was back and forth all the time on, as a matter of fact, it used to break the cups right off, so that there were many used out without any cups on at all and that spring was just flapping back and forth all the time.

Q. 62. Would not the walls of the lower cup prevent that thing?

Ans. No; the spring was simply floating in that cup.

Q. 63. In other words, the cup did not hold the spring up to any extent?

Ans. No; it just held it, that is all.

Q. 64. Did the spring have any action on the cup at all, in any way effecting the cup?

Ans. No; none at all.

Q. 65. Did you ever remove from Ford cars this second type of shock absorbers for any reason?

Ans. Yes, sir.

[fol. 112] Q. 66. For what purpose?

Ans. Because of the reason already stated, they used to rattle so, and the cups breaking, one thing and another, they could not stand for the things—the shock absorber.

Q. 67. Do you know whether or not the shock absorber was affected by the removal of the cup, the cup being taken off?

Ans. Yes; it would affect it.

Q. 68. I show you a circular which I will mark for identification Defendant's Exhibit 22, and ask you whether or not you recognize that shock absorber as being one of the absorbers about which you have testified?

Ans. I do.

Q. 69. What type of absorber is that?

Ans. Telescope.

Q. 70. That is what you called the second type Temco?

Ans. Yes.

Q. 71. Will you mark on the back of that circular, in ink, the telescope cup by the numeral 1 and would you indicate by the numeral 2 what you call the cup on the casting?

Ans. (Witness complies with the request of counsel.)

Q. 72. Will you indicate what this bolt was that went up through the cup by the numeral 3 and will you indicate the coil spring by the numeral 4?

Ans. (Witness complies with the request of counsel.)

[fol. 113] Q. 73. Referring to this view on the back of Defendant's Exhibit 22 and to the parts you have marked, when the bolt 3 was pulled down would the telescoping shell or part one come down around the part marked 2?

Ans. It would.

Q. 74. You say you have seen these absorbers with the parts of part 1 broken off the absorber?

Ans. I have.

Q. 75. What would cause that?

Ans. Well, as I said, that cap acted as a guide to that spring, as she was telescoping there was quite a strain brought to bear on the telescope cap and a sudden crash, I suppose, would put undue strain on as she came down and it would split it open, rip it open and break off. As I remember those castings they were cast malleable but I wouldn't swear to that; that is my impression.

Q. 76. Did the spring 4 of the Temco circular Defendant's Exhibit 22 engage the walls of the cup part 2? Did your experience show that the spring ever exerted any strain or war against these cups 2?

Ans. Yes.

Q. 77. In what respect?

Ans. They used to hit against the side. That was not a very close fit in the bottom. They used to bump back and forth and the springs was broke right off right at the top edge.

Q. 78. The top edge of what?

Ans. Cup 2; that spring would snap right off in the middle.

[fol. 116] Q. 79. Was that because the spring—what would cause that?

Ans. Well, an undue strain coming here with this cup broken or stretched out of shape (indicates respectively) so there was so much latitude in here (indicates) that that was just—well, a regular breaking strain brought against it. We used to replace those springs here (indicates) by the car load.

Q. 80. Did you buy the springs separately?

Ans. Yes.

Q. 81. For that purpose?

Ans. Oh, yes, indeed.

Q. 82. Did you buy them direct from the Temco Company?

Ans. No, I did not; I never did any business with the Temco Company.

Q. 83. Where did you buy them?

Ans. I can't answer that question; I think it was a fellow by the name of George Flint. I am not making that statement; that is my impression. He was a Ford parts dealer at that time and he carried accessories. My impression is that we bought them of him. That is quite a little while ago; I am not quite clear of that but that is my impression.

Q. 84. Did you ever have a pair of these absorbers on a Ford car of your own?

Ans. I did, both kinds.

Q. 85. What period of time?

Ans. Well, from quite a considerable time, I don't remember how long.

[fol. 115] Q. 86. Approximately?

Ans. Well, I put a set on of the first type and I experienced that bumping right away. I didn't run them a great while. I took them right off. Then I put a set of telescope on, in fact, I put three or four sets on and they so rattled I couldn't stand them. I put another set on. I had a chance to sell them second hand and moved them along that way.

Q. 87. Did you ever replace springs in your second Tenco kind on your car?

Ans. Yes; we were changing springs continually on those shock absorbers.

Q. 88. You say that you never returned those shock absorbers to the Tenco Company?

Ans. No.

Q. 89. Is it customary among Ford users when they find an article that is not satisfactory to return them to the dealers, or what happens? Don't they get their money back or something?

Ans. Very seldom.

Q. 90. Why is it? Are you a patient non-fault finding crowd?

Ans. My experience has always been with anything of that kind, it don't make any difference what it is, or what the part was, the accessory, all the time you try to get a rebate on any such part—it has cost more money than what it is worth and your time and worry, everything else, it does not pay to bother with it at all. My years of experience in that kind of business has taught me to forget it. That is so with parts as well as accessories. After you get all [fol. 116] through—you send it back to the factory, they

send back a letter they find it was not defective; they are very sorry they could not do something for you.

Q. 91. Have you ever applied the Apco shock absorber?

Ans. I have.

Q. 92. Do you handle those shock absorbers yourself or do you put them on yourself?

Ans. When a man comes in and gives an order for a set of shock absorbers, anything on the market—a man came in the other day and wanted a set of Defenders——

Q. 93. Shock absorbers?

Ans. —shock absorbers; we went and got them and put them on. I had just installed two sets of Thompson shock absorbers.

Q. 94. Are they Temco shock absorbers?

Ans. No; not that I know of.

Q. 95. In your experience with the K-W shock absorbers did you find that that absorber was struck by the fender rods and was inoperative too?

Ans. That was a very unsatisfactory shock absorber; that used to cramp, it used to pull sideways.

Q. 96. Was it hit by the fender rods?

Ans. That is not quite clear to me; I remember particularly, back to the K-W, the back end, I don't quite remember the front so well. It seems to me that the front one was set off on an angle on that K-W.

Q. 97. The purpose of that?

Ans. To avoid being struck by the fender rods.

[fol. 117] Q. 98. Did that shock absorber have a shell on?

Ans. Yes.

Q. 99. How was it fastened, do you recollect? Was it screwed on?

Ans. In principle with the first Temco.

Q. 100. That is, it had a case, a heavy case?

Ans. A case over the springs.

Q. 101. Do you recollect whether the K-W had any plunger or guide in the shell of the absorber?

Ans. Only in the holes at the bottom of the casing.

Q. 102. That is your recollection?

Ans. That is as I remember.

Q. 103. Did you put on more Temco than you did K-W?

Ans. Yes; I did. I put on a great many Temco.

Q. 104. Relative to the Temcos how many K-W's did you put on?

Ans. Oh, well, a very small percentage; I don't imagine I put over a half a dozen sets of K-W's altogether.

Q. 105. Over what period of time did your greatest activity in the application of Temco absorbers to Ford cars extend?

Ans. From 1912 to 1916, I should say.

Q. 106. Do you put on any Apco absorbers?

Ans. Yes; I put on a great many.

Q. 107. Do you hear much complaint of them?

Ans. No.

[fol. 118] Q. 108. Do you have any complaint?

Ans. Why we had some complaint on the old type.

Q. 109. What was that? Did that have a shell on, the old style?

Ans. Oh, no; there never was any complaint of that. That vas a real shock absorber. If we had some of those today we would do some business.

Q. 110. Just what trouble did you have with the Apco absorbers?

Ans. Why, it has been corrected; the trouble we had with the Apco has been corrected. We used to get a rattling in the shackle. As I remember it it was from the fault of not being bushed. The pins run through the casting that had just been drilled. I am not quite clear on that. I know that they did rattle and I know that as soon as they changed patterns of that bushing they eliminated that rattling we used to get there.

Q. 111. A rattling of what?

Ans. Of the shackles.

Q. 112. Did you have any trouble with the operation of it, the functioning of the Apco?

Ans. No, none whatever.

The witness on cross examination stated that he has known personally Mr. Wilson of the Defendant Company probably since 1911 or 1912; that he never had much business with Mr. Wilson directly nor with his company; that such business as was done with his company was done through jobbers; that he has handled the Apco goods through that period of time and that he has been handling shock absorbers since 1912; that the replacement business [fol. 119] with the Apco Company for defective parts has been direct with the factory.

C. Q. 125. Is that customary in the trade to do it direct with the factory?

Ans. Because they have advertised for use to do that.

C. Q. 126. They invited you?

Ans. Yes.

C. Q. 127. Over what period did they do that advertising?

Ans. Why, I have a letter hanging up in my office now, a circular letter signed by Mr. Wilson of perhaps a year ago, something of that kind on this particular thing I speak about, rattling of the shackles. They didn't want them on the market. They wanted to call them in so they made us a proposition to bring them back to the factory and they changed the sets.

C. Q. 128. Have they always taken care of the auto repairs that way?

Ans. Yes; they have.

C. Q. 129. Have you got any other circulars besides that with requests or offers to replace defective parts?

Ans. I don't know of any specific letter. I know they have made such advertisement in different ways.

C. Q. 130. Through the public press?

Ans. Why, I imagine so; I imagine the—I don't know whether that was in the paper or not, whether they published that in the daily paper or not; I don't think they did. I think that was through some form of advertising they might have sent to us.

[fol. 120] C. Q. 131. Through circulars?

Ans. Yes, things of that kind.

C. Q. 132. It has been the policy of the Apco Company to make good all defective parts?

Ans. Always.

C. Q. 133. You received one or more communications to that end?

Ans. Yes.

C. Q. 134. It is true of all shock absorbers, is it not Mr. Pierce, to some extent due to the very rough treatment they get on the Ford car the parts break and there have to be replacements?

Ans. Yes, sometimes.

C. Q. 135. Have you got that letter which was sent out by the Apco? Can you produce it?

Ans. I think so.

Mr. Keller: Defendant's counsel will be glad to produce the letter or a copy of it.

Mr. Toulmin:

C. Q. 136. Are you selling as many shock absorbers now of any kind as you did in the years 1912-1916?

Ans. No; nowhere near.

C. Q. 137. So far as your experience in this territory goes there has been a decrease in the use of shock absorbers?

Ans. From my personal experience, yes.

[fol. 121] C. Q. 138. It is generally true, is it not, that the Ford owner, due the buying of cars on the installment plan, is not able to buy accessories as he did during the previous years?

Ans. They don't doll the car up.

C. Q. 139. Up to about 1916, or before the war, it was almost a custom when a man bought a Ford to put everything on it?

Ans. Everything on the market.

C. Q. 140. And shock absorbers were very popular?

Ans. Yes.

C. Q. 141. The present day when a man buys a car for $5 down that is not the case?

Ans. The sale of shock absorbers has dropped off with me over my previous experience.

C. Q. 142. Will you tell me the name that was on the first Tensteel that you put on as you describe the so-called first type, what name was on there, on the shock absorber?

Ans. Tensteel.

C. Q. 143. Was the name of the manufacturer on there?

Ans. I think it was; there was an oval plate.

C. Q. 144. What was the name of the manufacturer?

Ans. I couldn't tell.

C. Q. 145. It had the name Tensteel on one side?

Ans. Yes.

[fol. 122] C. Q. 146. What year was it, or years, you bought those, the first type?

Ans. Well, it was around 1912.

C. Q. 147. Now, on the second type as illustrated in this circular Exhibit 22 I see that the shock absorber has a link which I will mark X in pencil; do you recall this link?

Ans: On those shock absorbers?

C. Q. 149. Yes.

Ans. Yes, I do.

C. Q. 149. That is called a radius link, is it?

Ans. We always called them shackles; that is the only name I know about.

C. Q. 150. But the shackle is really a link that connects the leaf spring to something else?

Ans. Well, not directly it does not. There is another shackle goes into that.

C. Q. 151. The second type of Timon shock absorbers were as illustrated in this circular?

Ans. Yes.

C. Q. 152. That second type—did they have a link through whatever name you may call it?

Ans. Yes.

C. Q. 153. Now, Mr. Flynn, there was a considerable clearance, was there not, between the upper part of this part of this housing and the lower part of the housing?

Ans. In the telescope?

[fol. 123] C. Q. 154. Yes.

Ans. No, not a considerable clearance.

C. Q. 155. That illustration is not correct then?

Ans. That was not a turned fit in there.

C. Q. 156. Now, Mr. Flynn, this circular Defendant's Exhibit 22 shows a very material clearance between the two halves of the casing; your statement is that the shock absorbers were not that way?

Ans. No; that is not the way at all.

C. Q. 157. What is the fact?

Ans. You asked me if there was any considerable clearance in the cap over the cap; my answer was, it wasn't considerable.

C. Q. 158. Was it as much as shown in the illustration Defendant's Exhibit 22?

Ans. Well, my impression would be that the clearance was not as great as it shows in that picture.

C. Q. 159. It has been some years since you have seen it?

Ans. No; I get some of them now.

C. Q. 160. You are pretty sure about that then?

Ans. I want this thing clear; my impression is this is a rough casting, this entire outfit. There is clearance enough so that it is not bound; there is not any place you could put your finger clear through.

C. Q. 161. How much clearance would you say?

Ans. Why, not over ⅛ of an inch all around.

[fol. 124] C. Q. 162. And it is your belief that the one casing hits against the other and that fractured one of the casings, is it?

Ans. I know that they do.

C. Q. 163. You are sure of that?

Ans. Yes.

C. Q. 164. Now, this K-W absorber you talk about, did that have a radius link?

Ans. No.

C. Q. 165. It did not.

Ans. No, sir.

C. Q. 166. You are sure about that?

Ans. Yes; the K. W. that I am thinking of did not.

C. Q. 167. What year was it you bought that K-W, during what years?

Ans. It was 1914 or later.

C. Q. 168. Was it after the second type of Temco came out?

Ans. I should say it was right around in that time. If you don't mind I will tell you how I am getting my dates. In 1912 my shop was on Broadway. I moved from Broadway in 1914 and went to my present establishment and I can remember that I put this K-W on at the time I came to 42 Cranston Street; that is what I am basing my dates on, and that is why I started saying, when you interrupted me as to the particular time when I was doing this work, that I am figuring on; I am figuring on the years from the time I was in those two shops.

[fol. 125] C. Q. 169. You now say with certainty, Mr. Pierce, it was between 1912 and 1916?

Ans. Yes.

C. Q. 170. Now, it is probably about the time, or at the time, that the second form of Temcoes came on the market, is that right?

Ans. Well, I don't quite place those two together but I should say it was around that time. I don't know just how long the second Temco had been out; I think it was out but I am not positive of that.

C. Q. 171. Did you ever sell any Temcoes or K-W either to Mr. Storrie or Mr. Wilson?

Ans. No; I never did.

C. Q. 172. Are they your customers?

Ans. No.

C. Q. 173. Is it not true, Mr. Pierce, that the Ford Company has changed the arrangement of those suspender brackets, radius bracket, during the last half-dozen years?

Ans. No, sir.

C. Q. 174. You think they are still the same as they always have been?

Ans. I don't think it; I know it.

C. Q. 175. Have the rod or radius rods always been the same?

Ans. Front or rear?

C. Q. 176. Both.

Ans. Just the same; that is to say there has been a change in the front radius rod from on top, underneath, but the principle is the same.

[fol. 126] The witness stated that there was no material change in the method of supporting the fender of Ford cars since 1912 to date; that they had put another small bracket on the front fender so as to take the rattling out, but that it was nothing material; that the thing which injured the casing on the Temco shock absorbers was the front fender bracket and this has never been changed on the Ford car; that right at that particular point the head light bracket came down through the fender bracket which came exactly in contact with the shock absorber cap, that that has never been changed on the Ford car and is still there. That the cup on the second form of Temco acted as a holder or seat, the lower part of the cap also acted as a seat and the upper inverted cup portion which the witness marked I Defendant's Exhibit 22 acted as a guide by engaging some portion of the absorber; it acted as a guide down over the lower cup of the telescope; there was a contact between the two; that he had seen those absorbers come in engagement with the Ford car in operation and in fact had tested it for that particular reason. That he never asked for any free replacements, but accepted the situation and let it go at that, that he did not go — the jobber who at the time was distributing the Temco and ask for replacements because he would not have got them if he did; that he would not get them and that he did not ask for them and anything else was pure assumption on

his part, that he had never heard of a guarantee, manufacturer's guarantee, for a considerable period of time on the Temco shock absorbers.

The witness further said that he did not know that the Apco absorber has practically the monopoly of the business in the Providence territory, and that he did not know that they are about the only ones being sold in quantities, but that from his observation and study as an expert on [fol. 127] this line, he has seen more Apco than any other kind and would say that a very large proportion in and about Providence are Apcos; and that he has had some broken springs of Apco, very few of them.

Mr. Toulmin: It is understood that I have the same objection to this witness as to the pertinency of the testimony.

Mr. Keller: Yes, that is true.

Redirect examination:

The witness stated that the old style radius rods of the Ford car came in through the perch in the top of the front axle, and they later changed and made a new style spring perch and this front radius rod came in, just simply slid up over the bottom of the perch shank. The radius rod would be under the axle instead of going through the perch, the perch would go through the rod at the bottom of the axle.

The witness then testified as follows:

Q. 201. Referring to Defendant's Exhibit 22, you spoke of a shell which you have marked 1 as a guide over the part marked 2; do you mean to imply by "guide" a real mechanical fit, or refer to it as a general guide for the spring? What did you have in mind when you used the word "guide"?

A. I said that was not a fit, that was not a turned fit, that was a rough casting that didn't come right down to a fit so that that was an absolute slip motion. There was a clearance, as I remember it, about ⅛ of an inch in here [fol. 128] (indicated) all the way round there (indicates), but that did, used to flap back and forth from this pivot. That is what I meant to say.

Q. 202. Mark the pivot by the numeral 5.

Ans. That was the tendency. It was just the same as you took that pin there (indicates) and did that.

Q. 203. Pin 3 shoved out from side to side?

Ans. There was not guide enough in this cup, that was not a clean fit in there.

Q. 204. Cup 2?

Ans. Cup 2; so this cap, as a matter of fact, did hit on each side of cup 2 so that cap 1 would rattle against cup 2.

Deposition of Thomas F. Wilson

Thomas F. Wilson, called on behalf of defendant and testified as follows:

Q. 1. Mr. Wilson, I refer you to page 121 of the interference record between Thompson and Storrie, in this case as Defendant's Exhibit No. 16, and in particular to Q. 79 propounded to Ralph P. Thompson and his answer thereto, and ask you whether or not you, or the Auto Parts Company, or the Apco Company, ever had any correspondence with the Temco Electric Motor Company in regard to shock absorbers, especially, say, during the year- 1912-1913-1914?

Ans. No.

[fol. 129] Q. 2. Did you, or any one connected with the Apco Company, ever have in the fall of 1912, or at any time thereafter, on a Ford car, a set of Temco shock absorbers for trial purposes?

Ans. No.

Q. 3. Did you, at any time, ever try to put on a set of Temco shock absorbers?

Ans. No.

Q. 4. Please state over what period of time Mr. William Storrie was employed by you or the Apco Company, and in what capacity or capacities?

Ans. Mr. Storrie has been employed by myself previous to the incorporation of the Apco Manufacturing Company as consultant continuously since 1910, and he developed certain articles for us for which we paid him a royalty and he also manufactured some articles for us which we bought outright and while he has never been on the Apco payroll

he has always been connected with the Apco Company in the above capacity.

Q. 5. Yesterday Mr. C. A. Pierce testified to the existence of a circular, a circular which had been sent by the Apco Company relative to some bushings and shock absorbers; will you produce a copy of that letter, if you have it, and will you explain what the matter was as to which Mr. Pierce testified?

Ans. The circular he referred to was not a circular but a letter written to five or six of our dealers—when I say "our dealers," I mean dealers who handle the Apco shock absorbers through jobbers in the city of Providence—explaining to them that through an oversight or error in the production department the shock absorbers were shipped locally with defective or short bushings and while we did [fol. 130] not know that these would give any trouble we would be very glad to replace, at a nominal figure, any such shock absorbers of this type that did give trouble, with new ones.

Q. 6. Where did that short bushing belong in the shock absorbers?

Ans. In what I should term the rear end of the radius link and it was known as the spacing bushing.

Q. 7. How many of these shock absorbers having short bushings were allowed to go out of the Apco factory, or went out of the Apco factory, without your knowledge or with your knowledge?

Ans. Well, I couldn't say but it was a very limited number and they were all shipped in the City of Providence.

Q. 8. None of them shipped outside the City of Providence?

Ans. No.

Q. 9. Well, approximately how many shock absorbers with that short bushing were shipped out?

Ans. At the outside there would be 100 sets.

Q. 10. Do you know whether or not the whole 100 sets came in after you sent out the circular letter, as returned?

Ans. To my knowledge not a single set of these came back for replacement, and I believe if they had come back they would have been called to my attention.

On cross examination the witness testified that the Apco Company takes pride in having as its policy the taking care

[fol. 131] of the jobber and dealer and that they take care of the people with respect to defective material and stuff designed by the Apco Company. That the Apco Manufacturing Company makes and manufactures in good faith and figures that it is up to the jobber to take care of himself in the matter of suits against it and that the Apco Company did not take care of the Pennsylvania Rubber and Supply Company in the suit against it by the Temco Electric Motor Company at Toledo. That he couldn't locate the copy of the letter which was sent to the dealers, that only 5 letters were written on the matter of the defective bushings and that he tried to locate a copy of it that morning and that his secretary was still looking for it. Defendant's counsel promised to produce a copy of the letter if found.

The witness then testified as follows:

Mr. Toulmin:

C. Q. 14. Did you want us to understand that this is the only defect ever developed in the Apco absorber?

Ans. Yes; as far as I know.

C. Q. 15. You are sure about that?

Ans. Postively.

C. Q. 16. You never had to make any replacement?

Ans. I won't say because if that bushing were—a consumer sent it in and made a claim, we would be liable to give him a new one that is not defective.

C. Q. 17. You never had to replace any broken springs?

Ans. I don't believe that we have replaced 25 broken springs in the history of the Apco shock absorber.

[fol. 132] C. Q. 18. Have you had to replace any coil spring supports or stanchions?

Ans. I should say the same number as of springs.

C. Q. 19. And how about the vertical hanger bolt that rests on top of the coil spring?

Ans. I think there we did have some trouble with the strap which we made. The first few shock absorbers produced used a strap iron connecting link.

C. Q. 19. Was that on the inside or outside spring?

Ans. That was on the inside; we have never made any that went on the outside spring.

C. Q. 20. How many of those were defective?

Ans. That I couldn't say but I should say they would run a little heavier than the springs and bases you referred to in the previous question.

C. Q. 21. Do you have a guarantee on your shock absorbers?

Ans. Yes; we have a guarantee.

C. Q. 22. What is that guarantee?

Ans. That the shock absorbers work satisfactorily.

C. Q. 23. For what period?

Ans. Today we specify no period.

C. Q. 24. You guarantee the workmanship and material?

Ans. We do.

C. Q. 25. You guarantee that they will work?

Ans. We do.

[fol. 133] C. Q. 26. Do you guarantee designs all right?

Ans. Naturally, if they will work we do.

C. Q. 27. How long do you guarantee—you don't know?

Ans. We don't make any specific time.

C. Q. 28. You do not make any guarantee to the specific automobile?

Ans. No, we do not.

C. Q. 29. Any return privileges?

Ans. What do you mean by "return privileges"?

C. Q. 30. When they are found to be defective?

Ans. Naturally if we guarantee against defects we replace with new ones. That is what the guarantee means.

C. Q. 31. Do you replace absorber for absorber, or do they have to put up some money to get a new one?

Ans. Sometimes we repair shock absorbers they send back, other times if they are worn beyond repairs we make an allowance on the old shock absorbers towards a new one.

C. Q. 32. So it is your policy to take care of your trade to the extent of repairs but you do not take care of them in the case of losses?

Ans. We do not; we did it one time. It was very expensive to us and did not seem to be efficient.

C. Q. 33. When was that?

Ans. The case I refer to particularly was the Hudson crank case, the case recently won by us.

[fol. 134] C. Q. 34. So you abandoned the Pennsylvania Rubber & Supply Company, did you?

Ans. I would not say we abandoned them; we never made any guarantee to take care of them and we did not.

C. Q. 35. Did you have any correspondence with them on the subject?

Ans. They might have told us they had been sued; as a matter of fact, we were sued with them.

C. Q. 36. Did they request you to defend them?

Ans. They may have done; I don't recollect.

C. Q. 37. Did you reply to them?

Ans. That I don't recall but their attorney at that time was Mr. Keller and I believe all correspondence relative to that I submitted to Mr. Keller.

C. Q. 38. Mr. Keller here in the room?

Ans. Yes.

C. Q. 39. Who is now the owner of the Storrie patent?

Ans. I don't know that he is the owner of the Storrie patent.

C. Q. 40. You have been informed of that?

Ans. Only what he has told me, that is all.

C. Q. 41. You accept it with a reservation?

Ans. I don't know that I would know. I think if Mr. Keller said that he had the patent I should think that he had it.

C. Q. 42. Did you undertake to recompense the Pennsylvania Rubber & Supply Company for their losses?

Ans. No.

[fol. 135] C. Q. 43. Did you make any agreement, written or otherwise, for that purpose?

Ans. No.

C. Q. 44. How are you going to secure yourself with your dealer the Pennsylvania Rubber & Supply Company for the loss of money, or will you lose money as a result of the settling of the cases against them?

Ans. We are still doing business with the Pennsylvania Rubber & Supply Company so I don't think they feel very badly about it.

C. Q. 45. So they get the matter taken care of by having additional business from you; is that it?

Ans. They gave us additional business.

C. Q. 46. They will make a profit, will they not?

Ans. Naturally on everything they buy.

C. Q. 47. They will be recompensed with that profit for having stood the loss on this suit?

Ans. No, no more than any other jobber who has to buy material from us will.

C. Q. 48. The net result is you have abandoned the jobber, the Pennsylvania Rubber & Supply Company, without any recompense; is that it?

Ans. Absolutely.

C. Q. 49. You let them go?

Ans. Absolutely.

C. Q. 50. Will you produce the correspondence you had with them and your reply?

Ans. Well, I don't know that I would do that.

C. Q. 51. You are requested to produce it?

[fol. 136] Mr. Keller: I object to the request, to the question and request for the reason that it does not concern the Temco Company what correspondence may have passed between the Apco Company and the Pennsylvania Rubber & Supply Company, the matter being res inter alios acta, and the matter being simply an attempt on the part of a competitor or, at least, a concern that was at one time a competitor of the Apco Company to inquire into the business details of the Apco Company and I therefore instruct the witness that if he should have any such correspondence in his file, not to produce it.

Mr. Toulmin: The matter is quite material. It has been the contention of the plaintiff that the Pennsylvania Rubber & Supply Company was merely a name for the doing of business actually by the Apco Company in the Sixth Circuit. The reason, of course, for the Apco Company staying out of the Sixth Circuit in view of the adjudication on the Thompson patent would be apparent. This matter has been pleaded and set up in this cause. We understand, of course, the reluctance of the defendant in this case to produce this correspondence. We do not doubt but the Court will draw its own conclusion as to the contents. The demand is renewed for that correspondence.

Mr. Keller: Counsel realizes that extended statements on the record, under the new equity rules, is out of place. He feels that the statement just made by plaintiff's counsel as to the character of the Pennsylvania Rubber & Supply

Company is not made in good faith. The Pennsylvania Rubber & Supply Company is a large concern that has been [fol. 137] in existence for many years in Ohio and Pennsylvania, a concern having some eight or nine large establishments distributed over the states of Ohio and Pennsylvania and adjacent territory, all which facts I feel are within the knowledge of the plaintiff's counsel. The Apco Manufacturing Company was sued by this plaintiff jointly with the Pennsylvania Rubber & Supply Company at Toledo and was dismissed by that Court. As counsel for the Pennsylvania Rubber & Supply Company I further wish to state of my own knowledge in refutation of the statement of plaintiff's counsel, that the Pennsylvania Company are not directly or indirectly connected with the Apco Company and have defended themselves without compensation from the Apco Manufacturing Company and any agreement for compensation, and so far as I know without any expectation of reimbursement for any expenses or costs that have been incurred by the suit of the Temco Company against the Pennsylvania Company which suit, it is submitted, was instituted solely for the purpose of attempting to bring the Apco Company within the jurisdiction of the Courts of the Sixth Circuit which have sustained the patent in suit.

Mr. Toulmin:

C. Q. 52. Now, Mr. Wilson, as to the suit against your other dealers in Ohio, Kentucky, Tennessee, I presume your answer will be the same thing, when it comes to litigation you will not defend them and do not defend them?

Ans. Quite right.

C. Q. 53. You abandoned them then out in that circuit?

Ans. If you wish to use that word, why, we did.

[fol. 138] C. Q. 54. You did not intend to take part and defend, directly or indirectly your distributors the Belknap Company of Louisville, Kentucky?

Ans. We did not.

Mr. Toulmin: At this point I would like to have, in view of the fact that Mr. Storrie is now in the room, the correspondence with K-W Ignition Company and their attorneys and Mr. Storrie produced in connection with the interfer-

ence I requested yesterday, and also the agreement with the K-W Ignition Company.

Mr. Keller: Mr. Storrie is here. I have not had a chance to discuss the matter with him. If he has located the papers I will be glad to have him make a statement.

Mr. Storrie: I have looked up my records but fail to find any further reference to the two letters which I produced in evidence yesterday.

Mr. Toulmin: How about the agreement with the K-W Ignition Company?

Mr. Storrie: The agreement, the original agreement I believe is on record.

Mr. Toulmin: What about the subsequent agreement?

Mr. Storrie: The final understanding was never put in writing, with this exception, I will state that we agreed to [fol. 139] continue in vogue the original agreement of which there is a written record.

Mr. Toulmin: I now call upon Mr. Wilson as president, I believe, of the Apco Manfacturing Company, and Mr. Keller as counsel for that company, to produce any of those letters or documents of this kind that they have in their possession; will they please do so?

Mr. Keller: I have no such documents in my possession; if Mr. Wilson has I will attempt to produce them after I have had an opportunity to see whether or not they contain any confidential matters that do not concern the issues in this case. Of course, I do not know whether or not any such correspondence exists.

Mr. Toulmin:

C. Q. 55. Have you got it, Mr. Wilson?

Ans. I have no such correspondence.

C. Q. 56. Have you any contracts or agreements?

Ans. None whatever.

C. Q. 57. Do you think you took proper precaution as a business man to manufacture these shock absorbers without having a license in writing with the K-W Ignition Company?

Ans. Yes; in view of the fact that Storrie had a license and that he had been to Cleveland and arranged personally for an extension of this license to apply to the Apco Manu-

facturing Company, I felt perfectly justified to manufacture shock absorbers.

[fol. 140] C. Q. 58. This was purely a verbal license?

Ans. Absolutely.

C. Q. 59. Now, Mr. Wilson, you have stated that you have had a relatively few number of breakages, replacements of your manufacture of this kind of shock absorbers; in order to judge of the accuracy of your statements, you having given the approximate number of replacements, will you please tell us what your total production has been of this Apco Company shock absorbers?

Mr. Keller: I object to that as an attempt to inquire into the business of the Apco Company, an inquiry which does not belong to a competitor, at least, a one-time competitor.

Ans. I don't care to answer that question.

Mr. Toulmin:

C. Q. 60. Do you decline to answer it?

Ans. I do.

C. Q. 61. How are we going to tell what the proportion of the replacements are repairs if you don't give us the total number you have manufactured?

Ans. Well, I would like to help you but I can't.

C. Q. 62. Do you decline to answer?

Ans. Yes; I have done.

Mr. Toulmin: Notice is given on the record that a suitable motion will be made to compel this answer.

The witness further said that for the year 1914, Mr. Storrie manufactured shock absorbers and the Apco Manufac- [fol. 141] turing Company had the exclusive sale of the shock absorbers; that late in 1914 the competitive prices made it impossible for the Apco Company to continue selling the shock absorbers and we turned the sales back to the William Storrie Company which is the name used by William Storrie, and that this business was continued for approximately four years but from that time on, that is from 1914 to 1920, he had no relationship with Mr. Storrie but that of the sale of shock absorbers for him.

That as a corporation the Apco Company was actively interested in this field only from 1920, that they were active in 1914, that they did not get active until after 1914 until 1920, that they acted in a serious way from 1914 to 1920, for a period of four years, that the Apco Company is operating under this permissive license from the K.-W. Ignition Company, that he refused to testify what license fee is paid the K. W. Ignition Company, or Storrie, whereupon plaintiff's counsel give notice that he would make a motion to compel the witness to answer the question. That he has not the slightest idea when he first saw either the K.-W. or the Temco shock absorber, that he is unable to answer the question whether he examined the Temco absorber or the K.-W. absorber in the year 1913, that he doesn't know whether he examined it in 1914.

He then further testifies as follows:

C. Q. 76. Have you ever examined it?

Ans. Why, yes.

C. Q. 77. Have you ever examined it carefully?

Ans. When we were manufacture carefully I should say we would look over our competitor's rather carefully. We had to do it.

[fol. 142] C. Q. 78. When you finally went out of business in 1914, due to competition as you say, you doubtless investigated your competitor's at that time; it would be natural, would it not?

Ans. No; the very fact they put that stuff out below what we can sell our shock absorbers put us out of the running entirely.

C. Q. 79. You would not look at competition?

Ans. Oh! yes. But prices is the only thing that is really competition in the Ford business. When competitors give such why, we simply pass out of vogue.

C. Q. 80. What are you selling your absorbers for now, for a set?

Ans. $25 a set.

C. Q. 81. What did you sell them for in 1914?

Ans. $25 a set.

C. Q. 82. Now, at the time you looked at the shock absorbers—I suppose you saw them before 1920, did you not?

Ans. Sure; Oh! yes.

C. Q. 83. Did you pick them up and look at them?

Ans. I wouldn't be at all surprised.

C. Q. 84. It is not true that you probably did, as a business man?

Ans. Yes, sure.

C. Q. 85. You contemplated competition before you went into the field?

Ans. Naturally.

[fol. 143] C. Q. 86. Did you observe the word "patented" published on the label of the Temco shock absorber?

Ans. I don't recall it.

C. Q. 87. You do not recall seeing it?

Ans. No.

C. Q. 87. Is the Apco Company a small company or a large company?

Ans. Well, according to Einstein, compared with the Standard Oil Company we are rather small, compared with the William Storrie Company we are large. It is a question of relativity.

C. Q. 88. What is the gross business of the company?

Mr. Keller: The question is objected to.

Ans. I refuse to answer that question.

The witness further said that the capitalization of the Company was a matter of public record and is a quarter of a million dollars.

Redirect examination:

The witness said he never had any concern over his license arrangements with Mr. Storrie as to whether Storrie had a right to license the Apco Company, that he never worried about it for a minute because he had every confidence in Mr. Storrie as Storrie told him he had the license and he felt sure that he did have it; that his confidence in Mr. Storrie grew out of his business relationship with Mr. Storrie and his personal knowledge of him, that there was never any doubt in his mind at all that Mr. Storrie went to Cleveland [fol. 144] and obtained from the K-W Ignition Company the right to license the Apco Company, that is the right to extend Mr. Storrie's license to the Apco Company or grant that company a license, that the license which he obtained

for the Apco Company was from the William Storrie Company. That he never had any business dealings with the K-W Ignition Company on this Storrie proposition or on any other proposition, that the K-W Ignition Company is not what you might term a general competitor of the Apco Company but that they make automobile accessories the same as Apco except that they make a different line of accessories; that at the present time they do not make anything that is in competition with anything that the Apco Company makes although they have done so in the past.

The witness stated that the defendant never paid the K-W Ignition Company any license fee or consideration for taking the license from Mr. Storrie, that neither the K-W Ignition Company nor any of its officers or stockholders in any way, are directly or indirectly interested in the Apco Company or in this litigation and that the K-W Ignition Company or any of its officers or stockholders have never advised him as to the prosecuting or handling of the litigation of the Apco Company on shock absorbers or on any other matters nor were they in any way interested in the suit. That he is not a stockholder or interested in the K. W. Ignition Company or in any company in which any of the K. W. stockholders or officers are interested.

That the license fee which the Apco Company paid to Mr. Storrie has been paid to Mr. Storrie direct.

That in every case that has been called to the attention of the witness in connection with the breaking of [fol. 145] the springs on the Apco absorbers the break has been due to defective manufacture of the springs themselves and not to the design of the shock absorber and this defect or defects were plainly noticeable at the factory.

Q. 108. In taking the license from Mr. Storrie on the Storrie patent did you discuss with him at all the patent situation of the respective shock absorbers on Ford cars or any other cars?

Ans. I suppose that matter was discussed generally.

Q. 109. Did you have any knowledge of the interference between Mr. Storrie and Mr. Thompson of the Temco Company?

Ans. Yes; I knew that there had been interference proceedings and that these proceedings were declared—decided in favor of Mr. Storrie.

Q. 110. State whether or not, to your knowledge, those interference proceedings and the fact that Mr. Storrie obtained the patent instead of Mr. Thompson had anything to do in forming a conclusion in your mind in respect to the patent situation and, if so, what the conclusions were?

Ans. My conclusions were that this gave Mr. Storrie the patent on shock absorbers and that when we obtained a license from Mr. Storrie we were perfectly safe and justified in going ahead in the manufacture of shock absorbers under this patent.

Q. 111. I take it that before the corporation of the Apco Company was formed that a company known as the Apco Company existed before the incorporation; is that so?

[fol. 146] Ans. No; the name of the company was the Auto Parts Company. That was the name used by me in the conduct of my business, I being the sole owner of the Auto Parts Company.

Q. 112. Did the Auto Parts Company use as a trade mark the word "Apco" on the Storrie shock absorbers, or the shock absorbers made in 1914?

Ans. Yes.

Q. 113. Was your business during 1914 up to the incorporation of the company in 1920, done by you as a company, as the Auto Parts Company?

Ans. No; it was from 1914 to 1917, as the Apco Manufacturing Company was incorporated in 1917 and not in 1920.

Chester A. Pierce, is recalled on behalf of the defendant:

Mr. Keller:

Q. 205. Mr. Pierce, you telephoned me at this office that you had discovered some Temco Company shock absorbers; will you kindly produce them?

Ans. I do.

Q. 206. Referring to these shock absorbers which I am going to have marked for identification Defendant's Exhibit 23, 24, 25, 26 and 27, and ask you where you obtained them?

Ans. In my shop.

Q. 207. Can you identify these absorbers and tell us where they originated so far as your shop was concerned?

[fol. 147] Ans. I bought these shock absorbers new and put them on my own car.

Q. 208. All of them on your own car?

Ans. Yes.

Q. 209. When did you have them on your own car?

Ans. 1919.

Q. 210. For how long a period?

Ans. About two or three weeks.

Q. 211. What are the makes of these shock absorbers?

Ans. Temco.

Q. 212. Are they of the type which you testified to yesterday as the second type or the type with a telescope shell?

Ans. There was one telescope. (Witness refers to Exhibit 27.) And there was four of the old type, a complete set.

Q. 213. Now, this telescoping one, Exhibit 27, was that on your car in 1919?

Ans. It was.

Q. 214. And were the other four on, Exhibits 23 to 26, inclusive, were they on your car in 1919?

Ans. They were.

Q. 215. Will you state why you took them off your car?

Ans. I sold the car just at that time.

Q. 216. And removed the shock absorbers?

Ans. I saved the shock absorbers because I had a chance to sell them.

[fol. 148] Q. 217. Then, as I understand it—let me get you right on this; you first had those shock absorbers on your own car and took them off of your car and sold your car?

Ans. I did.

Q. 218. When you removed the shock absorbers from your car were they in the condition you now see them?

Ans. No; they were new.

Q. 219. How did they get in the condition they are now in?

Ans. I sold them to another man and put them on his car and he ran them three years, something like that.

Q. 220. Will you please name this party?

Ans. James A. O'Loughlin.

Q. 221. Of Providence?

Ans. Yes; 86 Cranston Street.

Q. 222. You say he ran those for three years?

Ans. I would say it was about three years.

Q. 223. Did he have any repairs made on them by you in that time?

Ans. Yes, considerable; we put on new caps two or three times and quite a number of springs.

Q. 224. Did you ever have any complaints from him in connection with these four shock absorbers?

Ans. I did, after he had had them on about a year.

Q. 225. What was the nature of those complaints?

Ans. He could not keep the caps on there and—he couldn't keep the caps on there and the springs kept breaking.

[fol. 149] Q. 226. Did you investigate why the caps broke and why the springs broke?

Ans. The fender bracket was knocking the caps off of the spring, from the fact of being out of true lay out from one side, would catch on the side of the casing along in the center of the spring and break the spring.

Q. 227. Do you recollect whether or not over the period of three years how many spring changes you made, renewals?

Ans. I would not say, no, but several.

Q. 228. And how many caps renewed?

Ans. I would answer that the same way, several caps, till we couldn't get them any way.

Q. 229. How did you come in possession of these absorbers now?

Ans. He came and ordered me to take them off his car; he didn't want them on any more.

Q. 230. Why?

Ans. He said they were very unsatisfactory.

Q. 231. As to the absorber with the telescoping casing, which is Defendant's Exhibit 27, when was that put on your car?

Ans. That was put on just ahead of this set here. I had a set of these on here and they were sold—(pointing to Exhibit 27)—and they were so noisy that I couldn't stand them so I took that set off and I had this set in stock brand new (referring to Exhibits 23 to 26 inclusive), and I put that set on. It was right after that that I sold the car.

[fol. 150] Q. 232. Have you got the other three absorbers with the telescoping shell?

Ans. Yes.

Q. 233. You have three of them?

Ans. I imagine so; I have got numerous absorbers there, a large box of junk.

Q. 234. I notice in Exhibit 27 the casing is indented; can you tell me how that occurred?

Ans. That was caused by that bracket I mentioned before.

Q. 235. Taken into consideration with this, the telescoping casing, where was that bracket catching the casing?

Ans. This spring would catch on the side of the housing and hold and would not allow the telescope to work, the bracket would go down and knock it down with a bump that is bearing me out that these things were so noisy and rattling that we couldn't stand the absorbers on the car. That spring would catch on the middle of that spring on that coil and the minute that fender would rap that it would come down with a bump; in other words, that telescope didn't work at all times because the spring would catch on the side. There is a spring there (referring to Defendant's Exhibit 25) worn almost in half now. There is a shock absorber that has not been disturbed since it was taken off the car and that spring is worn in nearly half way.

Q. 236. If you have the other remaining shock absorbers comprising the set with the telescoping cap will you produce them if you can find them?

Ans. Yes; if I can find them I will be glad to.

[fol. 151] Q. 237. Can you produce them within an hour?

Ans. No; I couldn't do it within an hour. I don't know, I will look it up, see if I can find them. I imagine I can produce them. I have a box as big as the desk loaded with shock absorbers of all types, and other junk. We can go through that and produce these shock absorbers if they are there; I imagine they are.

Cross-examination:

The witness stated that he did not believe he had sold a set of Temco absorbers since 1919 but that at all times he had sold some Apcos.

Redirect examination:

Witness was handed the springs of defendant's Exhibits 28 and identified them as being Temco springs and stated that he carried such springs in quantities during the year 1919 and that he thought that he had a few more springs in addition to those of the exhibit that he believed he could produce a half a dozen more of them, that the springs were carried in stock for the purpose of replacing springs in Temco absorbers that would break, that they are genuine Temco springs bought from the jobber, what the name of the jobber is as he recalls it is that of George Flint, that he is not positive.

That the shock absorbers of defendant's exhibits 23, 24, 25 and 26 of Mr. O'Loughlin's car were sold to Mr. O'Loughlin for $15.

The following objections then appear of record:

Mr. Toulmin: Counsel for the plaintiff objects to this proof as heretofore noted, which is an attempt to cast a reflection on the operativeness of the patented structure [fol. 152] which has been so copiously imitated by the defendant, and further objection is reserved until tender is made.

Mr. Keller: The defendant's position is, of course, that the shock absorbers in question were not made under the Thompson patent in suit because they do not involve all the elements of the Thompson patent, and further he denies any of this evidence or any other evidence of a similar character was ever introduced in any record in any suit involving the Thompson patent in suit.

Deposition of Thomas H. O'Loughlin

James A. O'Loughlin, called on behalf of defendant, testified as follows:

That he is 26 years of age, that his occupation is that of heating and plumbing, that he manages the business for his mother as head of the Estate of James O'Loughlin, that the Estate owns the business which he operated.

The witness was shown the exhibits 23 to 26 inclusive and he stated that he should be able to identify them because he had so much trouble with them, that they belonged to him and that his guess is that they were put on his car in 1919, that the car was repaired and remodelled by Mr. C. A. Peirce, that Pierce put them on the car at the time the car was fixed.

The witness then testified as follows:

Q. 16. Can you state how long they were on your car?

[fol. 153] Ans. They were on there until about two years ago, a year or two ago; in fact, they were taken off the year before I got rid of the car, pretty close to a year ago.

Q. 17. Will you state whether or not you ever had any trouble with those shock absorbers when they were on the car, on your car?

Ans. We always had trouble with them.

Q. 18. Just what trouble?

Ans. Springs breaking and springs catching on the side; we would go along and take a jounce. The first thing you would be going along smooth then there was a jar as if something let go. It had me worried. I used to run in to Mr. Pierce with them. I didn't think they were the shock absorbers at that time, although I kept complaining that way, until one day I saw it slung to the side as if the spring was cut on the edge on what started it, that cup there.

Q. 19. Did you ever have the springs changed in these absorbers by Mr. Pierce or anybody?

Ans. All the springs were changed quite a few times, I would say three or four times any way. I got bills for the changes, for changing them at the time.

Q. 20. Can you produce those bills?

Ans. I think I can; I would not be surprised if I can, to tell you the truth.

Q. 21. Did you ever have any caps on there replaced?

Ans. The caps were all the time being knocked off by that rod that goes down from the mud-guard, the rod that supports the mud-guard and fastened to the body, that is the rod that supports the front mud-guard, and also the [fol. 154] back end would strike it, knock the caps right off, either cut them off or knock them off a number of times. I have never played with them at all. We had a set before

that of different make; we were satisfied with them. We had no end of trouble with these.

Q. 22. Do you know what the make of them were?

Ans. I think they were Haskell; I couldn't tell you just what the name was. They were of different construction from that altogether.

Q. 23. How are you able to identify these shock absorbers as yours?

Ans. I think I know them by sight, seeing them so much on there and having so much trouble with them, I think, just like anything else.

Q. 24. Did you see these shock absorbers within the past day or two?

Ans. No, sir.

Q. 25. Is this the first time you have seen them since they were taken off, or did you see them at Mr. Pierce's place?

Ans. Mr. Pierce called me up last night and wanted to know if I could identify the shock absorbers he took off my car before. I said I ought to be able to; and he took me down and asked me if them were them. I said yes.

Q. 26. You saw them last night at Mr. Pierce's place?

Ans. Yes; I am only just a little above his place on Cranston Street.

[fol. 155] Cross-examination:

Witness stated that his business was the plumbing and heating business that the type of car on which the shock absorbers were replaced was a touring car of 1913, that the car was not used in his business but just for the folks; it was used occasionally; that they had a Ford runabout that they used in *they used in* the business, but whenever that was out of commission for a day or so they used to run the other. When asked whether it was used in the business when the other car was out of commission the witness said that it could be called so, though it was nothing to amount to anything, the use being merely to help out. That the car was not bought from Mr. Pierce, that it was bought by his father originally in 1913 and then after his father died he had it. That the witness had the overhauling done and that was when the shock absorbers were placed, that Mr Pierce did a number of things at the time. That he had

trouble with the oil throwing and put on a new block; that he went to quite an expense at the time, had a new top put on the car and the car newly painted and new fenders put on, one fender being on the back and one on the front where it was hitched to the mud guard, if he remembered rightly as it was quite a little while ago, that the shock absorbers were put on in 1919, he thought.

The following statement of the counsel appears on record:

Mr. Keller: Counsel for defendant wishes to state that the witness Mr. O'Loughlin who has just testified was not present in the room when Mr. C. A. Pierce was testifying [fol. 156] this morning in connection with these same exhibits. The shock absorbers heretofore identified as Defendant's Exhibits 23 to 27 inclusive, and the springs Exhibit 28, and also the paper exhibits heretofore offered and including Exhibits 19, 20, 21 and 22, are offered in evidence and the examiner is requested to mark them with their respective exhibit numbers as the exhibits of the defendant.

Mr. Toulmin: The offer and the introduction of these exhibits is objected to for the reasons heretofore stated that the question of the operativeness of the patented structure can no longer be questioned and any attempt to prove miscellaneous breakage naturally in any manufactured article, especially on the Ford in the hands of rough users, is immaterial and improper testimony as this question has been closed by a Court of Appeals of competent jurisdiction, and it is to be noted on the record that in the K-W Ignition Company record that similar attempts were made in that case by somewhat parallel testimony with the result which will be found in the opinion of the Courts who passed upon that record.

Mr. Keller: I object to counsel arguing the case on an incomplete record and adducing his conclusions of alleged statements of findings in another court on a different record and different facts that at this session we are not attacking by this particular bit of testimony dealing with the question of the operation of the Thompson patent in suit. Counsel does not desire to argue the case and insists he has a right to make out his case and to prove facts which are necessary for the defence and to prove suppression of facts by the Temco Company from the records of the litigation heretofore had on this patent in suit.

[fol. 157] Mr. Toulmin: Counsel for the defendant is called upon to state what facts he claims were suppressed.

Mr. Keller: Counsel for the defendant wishes to call the attention of the Court to the assumption of innocence which is present in the statement just made by plaintiff's counsel and wishes to state that arguments on the facts of this record will be reserved for final hearing.

By agreement of counsel the signatures of the witness are waived, also the certificate of the Notary before whom the depositions are taken is waived.

Affidavit of Frank L. Dyer

I am 53 years of age; reside at Montclair, New Jersey, and at the present time am engaged in the exploiting of inventions, and in experting suits based on letters patent. For more than thirty-five years I have been actively connected with the subject of inventions and patents thereon, and from 1892 until 1908, I was in active practice as a patent lawyer, during which time I had occasion to prepare and prosecute in the Patent Office several thousand applications for patents relating to many and diverse arts. I also have had occasion to familiarize myself with many thousands of patents in practically all of the industrial arts, and am familiar with the language and expressions used therein. In 1897 I moved my office to New York City, where I formed a partnership for the practice of patent law with my brother, Richard N. Dyer; and from that time until 1908 I was in very close association with Thomas [fol. 158] A. Edison and prepared or supervised the preparation of all his patent applications filed during the period stated; in fact, from April 1st, 1903, until the end of 1912 my office was located at Orange, New Jersey, where I was practically in daily touch with Mr. Edison, and become familiar with his methods of experimenting, witnessed many experiments by others, and made many experiments myself, in this way familiarizing myself with many of the phenomena of physics. In 1908, I was placed in executive charge of the various Edison enterprises at Orange, and remained in that capacity until the end of 1912, when I

moved to New York and became President of the General Film Company, a concern with which Mr. Edison was identified, and with which I remained until early in 1914. Since that time, I have devoted myself to my present work.

During my professional career I have had occasion to act as mechanical expert in more than one hundred suits based on patents, and in fact during recent years my time has been almost continuously occupied in such work. I have frequently been retained as a mechanical expert by the United States Government in connection with suits pending in the Court of Claims and involving questions of invention and letters patent. I have made many inventions myself in various arts, on which upwards of one hundred patents have been granted; and am an associate of the American Society of Mechanical Engineers, my membership in that Society being based upon my work as an inventor.

I am familiar with the operation of springs, and with the laws underlying same, and have made many experiments with them in connection with suits in which I have acted as patent expert. My familiarity with springs dates from the [fol. 139] time when I was President of Thomas A. Edison, Incorporated, the business of which was the manufacture and sale of Edison Phonographs, practically all of which were operated by spring motors.

I am quite well acquainted with the Ford car and have generally owned one most of the time for several years past, in addition to a car of larger size, and in fact in connection with a suit in which I represented the Ford Motor Company, a number of years ago, I spent upwards of a week at Detroit in the Ford Plant and became quite familiar with the methods of manufacture carried out by the Ford Company and with the details of construction of the Ford Car.

I have read the affidavit of James T. Newton herein and have considered the same in connection with the exhibits referred to by him.

I observe that Mr. Newton in his affidavit appears to regard the Thompson patent in suit, No. 1,072,791, as a broad and generic patent, and in attempting to apply the terms of the claims thereof to the radically different device of defendant's herein, he plainly disregards the limitations of those claims. Of course, with a broad and fundamental patent the language of its claims may be entitled to a liberal in-

terpretation; but this is not so with a narrow and specific patent. As I will point out hereafter, the Thompson device amounted to nothing more or less than the adaption of very old mechanical principles to a particular type of automobile, involving not the slightest measure of invention, in my opinion, but utilizing the simplest mechanical skill. As a matter of fact, the Thompson device as disclosed in the patent, is a very poor mechanical construction and very imperfectly utilizes certain principles of construction and operation that have long been recognized as desirable in the automobile art.

[fol. 160] The Apco Shock Absorber manufactured by defendant herein is an entirely different device from the construction disclosed in the Thompson patent in suit; operates practically on a different principle and utilizes in a highly efficient manner the knowledge which the prior art had taught as to the construction and operation of springs for use with automobiles.

That the Thompson patent is in fact a most narrow one, is clear from the opinion of Justice Clarke who, as District Judge, had occasion to consider the patent in the case of Temco Electric Motor Company vs. K-W Ignition Company (case not reported). In that case the equities were such that on the final accounting (283 Fed. Reporter, p. 873), the Court of Appeals for the Sixth Circuit decided that a penalty of $50,000 for punitive damages "is not a sufficient award for these purposes. We think it should be increased to $100,000." Furthermore, Justice Clarke apparently had before him only instances in the prior art in which the alleged theory of operation of the Thompson patent was utilized with horsedrawn vehicles and had never been used in connection with automobiles. Finally, Justice Clarke was evidently so undecided as to whether the Thompson patent involved the slightest scintilla of invention that he was persuaded to the contrary by the immediate adoption of the invention by the general public. That, he said, "is very persuasive evidence that it possesses that novelty and merit which lift it to the level of invention." And his final conclusion was that—

[fol. 161] "Upon the whole, though not without misgiving, I am of the opinion that the combination of the patent in suit possesses a novelty and utility which entitle it to be

classed among inventions, and that it is valid and should be sustained."

Upon appeal, the Circuit Court of Appeals decided specifically that "it is a narrow patent, but it involves invention and is valid" (243 Fed. Rep., p. 588).

With the Ford car, in order to make it as cheap as possible, a somewhat different arrangement of spring suspension is used than is good practice with the higher grades of automobiles. Ford uses a semi-elliptic leaf spring upon which the body of the car is supported above the front and rear axles, each spring extending parallel to the axles and its ends being connected to the front or rear axles as the case may be by links or shackles which connect with spring supports or perches bolted to the front axle, or to the brake drum flange. Referring, for example, to the Thompson patent in suit, ordinarily at the front axle, instead of the vertical guide D, there is provided a perch, to the upper end of which the links B connect, and the same is true in the case of the rear axle construction shown in Figure 4 of the patent in suit. What the patent in suit proposed was the substitution of a yielding or elastic connection between the ends of the leaf springs of the Ford car and the axle thereof in place of the direct connection of such springs to the axle by means of the spring support or perch, and the links B, as with the regular equipment. [fol. 162] In other words, the Thompson patent proposes to introduce a spring shackle instead of a non-elastic shackle for connecting the ends of the usual leaf springs to the axles. To this end, what the Thompson patent discloses is the removal of the ordinary perch or spring support for each end of the front and back springs and the substitution of a strong, relatively long guide D, which is surrounded by a relatively stiff spiral spring G, the upper end of this spring being guided by a collar or sleeve H, the spring being confined between a washer F at its bottom and the flange of the collar or guide H at the top. Entirely surrounding the spring G is a casing or hanger C, the guide D being provided above this casing with a nut engaging the end of said guide D whereby the coil spring will be maintained under the desired initial tension. Each of the hangers C is provided with an ear I, with which the shackles

B make connections as they formerly have done with the rigid spring support or perch for which the guide D was substituted. By thus interposing a coil spring between each end of each leaf springs and the corresponding axle, the Thompson patent asserts that certain advantages are secured, as follows:

"Shock to the road wheel is absorbed more rapidly by the quick acting coil spring that by the slow acting friction restrained leaf spring. The result is that shock to the road wheel is first absorbed by the coil spring, and therefrom is transmitted to the body of the car and the occupants through the slow acting leaf spring. As the compression and recoil of the leaf spring is not synchronous with that of the coil spring, the re-coil of the coil spring begins to take place before the full effect of shock to the road wheel can be transmitted through the leaf spring to the body [fol. 163] of the car. This see-sawing action, as it were, between the quick acting coil spring and the slow acting leaf spring causes a large portion of the effect from vibration to be nullified by the action of one and the reaction of the other of these springs taking place simultaneously, thus absorbing within the spring element the sharper vibrations, thereby making the car more easy riding" (page 1, lines 84-108).

In my opinion the reference in the foregoing quotation to the socalled see-sawing action of the coil springs with respect to the leaf springs is purely fanciful, without any basis of fact, and is merely one of those statements which frequently appear in patents for the purpose of lending an air of mystery to a very simple and obvious mechanical device. It is, however, a fact that a coil spring, if mounted to respond freely, is a relatively quick acting spring as compared to a leaf spring in which, when deflected, the leaves move relatively to each other with very great friction and the response is therefore comparatively slow. If, therefore, a quick acting spring like a coil spring, is combined with a slow acting leaf spring, there will be a certain measure of quick sharp shocks absorbed by the coil spring which would otherwise be transmitted to the car and the occupants therein, since under these very rapid shocks the

slow acting leaf springs will act practically as rigid members.

I will presently point out that this principle of spring construction and operation was old prior to the Thompson patent and had been proposed by a number of prior inventors. The Thompson patent did not utilize this principle in an efficient way, because the mechanical construction proposed by the patentees was such as to introduce a very considerable friction in connection with the operation of the coil springs which, therefore, were not mounted [fol. 164] freely, but would be frictionally retarded in the same way, yet probably not to the same extent as with the leaf springs. The construction is such, in fact, that under the operation of a load imposed upon the shackles B, the hanger C will be cramped side-ways to impose very considerable friction between the hanger and the washer F at the lower end, and between the collar G and the guide D at the upper end. The Thompson construction, in other words, is one in which the old suggestion of utilizing a quick acting coil spring in combination with a slow acting leaf spring is employed, but where the full benefit of the coil spring is very considerably reduced by reason of the poor mechanical construction proposed by the patent.

I will now refer to a number of prior examples showing the use of coil springs in combination with frictionally retarded leaf springs in automobile construction whereby the relatively quick action of the coil springs may be utilized for the absorptions of sudden shocks which otherwise would be transmitted to the vehicle body.

In British Patent to Bussing, No. 3385, of 1907, Figure 1 shows the usual fore-and-aft leaf spring by which the axle R is connected to the chassis as with the higher grade cars. The leaf spring is indicated by the reference letter n. With this usual arrangement, two leaf springs are used at the front axle and two at the rear axle of the automobile, the center of the springs being connected with the axles and the ends of the springs being connected by shackles to brackets which extends from the chassis. As I have above stated, with the Ford car, in order to make it as cheap as possible, only two springs are used, the center of the springs being connected to the body of the car and the ends of the

sp-ings being connected by shackles to the axles. If figure [fol. 165] 1 of the Bussing patent be turned upside down, it will illustrate the Ford arrangement, assuming the chassis o to be the axle and the axle r to be connected to the body. The Ford arrangement, in other words, is simply the usual arrangement turned upside down, the springs extending crosswise of the car at each end instead of lengthwise thereof. With the Bussing patent, the ends of the leaf springs n are connected by shackles d to rods e, having washers f thereon, the position of which may be adjusted by nuts appearing on the lower ends of the rods e. Between the washer f and the under side of the bracket h is a heavy coil spring g. The bracket h is formed with a bearing or guide for guiding the rod e and the fore-and-aft strains which are imposed upon the spring are taken care of by radius links b connecting the shackles d with a small auxiliary bracket a. It will thus be seen that the weight of the chassis rests upon the coil spring g, thence upon the washer f, and finally the ends of the leaf spring n. In other words, the leaf spring will be connected to the chassis through the intermediation of coil spring shackles in precisely the same way, so far as principle is concerned as with the Thompson patent in suit. When small rapid shocks are encountered with the construction of the Bussing patent, the leaf spring acts practically as a rigid element and these shocks, instead of being communicated to the body or chassis are absorbed by the coil springs. The arrangement shown in Figure 2 of the Bussing patent is the same as in figure 1, except that the links b are reversed, while the arrangement of figure 3 is somewhat allied to the other arrangements, except that instead of the links b to absorb fore and-aft strains, the upper end of the rod e is connected to a bearing block m, working in guides k.

[fol. 166] I am informed and believe that the British patent to Bussing which I have referred to has never been considered by any Court in connection with the Thompson patent in suit. I understand, however, that the German patent to Bussing, No. 191,371, was considered, or at least was set up in the answer in the suit against the K-W Ignition Company, athough not specifically referred to in the opinion.

I would point out that with the German patent, figure 1 shows practically the arrangement of figure 3 of the British patent, the rods e being guided at their upper ends in vertical guides whereby any flexing of the leaf spring n will tend to jam the bearings at the upper end of the rod e in the guides therefor, and practically make a rigid connection, or at least seriously interfere with any response in the coil springs.

No arrangement is shown in the Bussing German patent corresponding with figures 1 and 2 of the British patent above considered, in which the rods e are guided by well defined bearings on the brackets h, as proposed in the Thompson patent, but the mechanical construction is very much better worked out. I am of the opinion that if this British patent to Bussing had been before this Court in the original K.-W. Ignition Company case, where the patent was sustained by Justice Clarke, "though not without misgiving", a different conclusion would have been reached. In view of this Bussing patent, I do not see the slightest degree of invention in the Thompson patent. It clearly shows the use of quick acting coil springs in combination with frictionally retarded leaf springs and all the benefit and advantages which are claimed for the Thompson construction would be secured by the construction of the British patent. I recognize, of course, that the Bussing arrangement is not shown in connection with the Ford car, but [fol. 167] obviously once the suggestion has been made of using a spring shackle for connecting a leaf spring to any desired member of the automobile structure, it could be adapted to a Ford spring without the slightest amount of invention. Any skilled mechanic would make this change as a matter of course.

The French patent to Peugeot, No. 418997, December 23, 1910, also shows an arrangement in which the leaf spring b is connected at its ends of the chassis through quick acting coil springs a. The arrangement is ingenious as the rod d which connects these coil springs a with the end of the leaf spring, passes through a bearing sleeve i, which not only guides the rod in its vertical movements, but permits the rod to move axially to accommodate the lengthening and shortening of the leaf spring in operation. The construction of the Peugeot patent represents a very high or-

der or mechanical skill, but it still employs precisely the principle proposed by Thompson in utilizing a quick acting coil spring for absorbing small, sudden shocks which would otherwise be communicated to the chassis because the leaf spring would not have time to respond to them. As is well known the Peugeot Company in 1910 was a very prominent manufacturer of automobiles in France and the patent discloses the high order of mechanical design which might be expected from a practical manufacturer.

I am informed, and believe, that this Peugeot patent has never been considered and has never been set up in the answer in any case involving the Thompson patent in suit. It clearly represents an intelligent recognition of the desirability of employing quick acting coil springs in combination with frictionally retarded leaf springs for the purpose of absorbing small, sudden shocks. With this patent before him, I am of the opinion that any skilled [fol. 168] mechanic will not have the slightest difficulty in applying the same principle to a Ford car so as to connect the leaf springs thereof with the axles through quick acting coil springs.

French patent to Cosset, No. 441,832, of March 27, 1912, is another interesting example of the application of the same principle of applying quick acting coil springs in combination with frictionally retarded leaf springs. With this patent the leaf springs used are fully elliptic, such for example as are used on the Franklin car. In other words, there are two semi-elliptic springs E and M, which are ordinarily connected at the centers D and M by means of links or shackles. Cosset, however, proposes to interpose coil springs in lieu of these links. He therefore connects the center M with a plate K, against which coil springs G and H bear, the lower ends of these springs bearing upon the plate O, which is connected by links B and C, with the center D. Radius links F, connect the center M with the links B and C. It will thus be seen that the two sections of the leaf spring are connected together by means of quick acting coil springs and any small sudden shocks, to which the leaf springs will not respond, will therefore be taken up and absorbed by the quick acting coil springs. The patent therefore, is another example of the practice proposed in the Bussing and Peugeot patents, and illustrates the appli-

cation of the principle to a full elliptic spring arrangement. In all of these patents all that has been done is to disconnect the usual rigid shackles, to which the ends of the leaf springs are connected, and to substitute a quick acting coil spring. In doing this, the ordinary designer or mechanic might adopt a multitude of arrangements. With the Thompson patent in suit the patentees simply adopted one [fol. 169] arrangement, which happens to be a very poor arrangement, and defendant herein in carrying out the old principle, has adopted an entirely different arrangement.

The United States patent to Anger, No. 1,031,612 of July 2, 1912, is merely another example of the old principle, to which I have referred, of connecting the ends of a leaf spring to the axle or chassis of an automobile by means of a quick acting coil spring (See Figure 5). This patent is of interest because it shows the two methods of leaf spring arrangement herein discussed; that is to say, in Figures 1 and 2, longitudinally arranged leaf springs are employed, the ends of which are connected to the chassis and the center to the axle, while in Figure 5, an arrangement somewhat like the Ford front spring is shown, the center being connected to the body of the car, and the ends to the front axle.

In this patent, the advantage of using quick acting coil springs to absorb small shocks is pointed out:

"This invention relates to springs or spring devices for road vehicles, the object being to more effectually secure smoothness and uniformity of motion, absorb vibrations and concussions, such as are experienced when a vehicle is traveling along a road, also enable springs to be adjusted to vary the resiliency to suit circumstances" (page 1, lines 9-16).

Further:

"A resilent and adjustable quick acting spring is thus formed which absorbs all the ordinary rapid road shocks and can be adjusted by the nut at the top so as to give the desired flexibility" (page 1, lines 69-73).

[fol. 170] "These tortional springs overcome all the unpleasantness of being thrown about by the reaction of springs when passing over bad roads and hold the wheels

to the road, thus saving wear of tires and allowing full power and effort to the engine to be transmitted through the wheels to the chassis frame" (page 1, lines 103-110).

And again:

"The laminated spring for absorbing the greater road shocks, the vertical spiral springs to absorb the lesser ones, and the transverse spirals to act as spring checks as well as shock absorbers so that excessive reaction or bounding is checked, can equally well be applied to the front or rear axle" (page 2, lines 120-126).

I have referred to the Anger patent largely for the purpose of showing the clear appreciation by the patentee of the advantages of using quick acting coil springs to supplement the action of leaf springs. This Anger patent was before the Court of Appeals in the suit against the K-W Ignition Company and was criticized because

"it is primarily built into the car, and is not constructed as a separate or separable part. His entire spring arrangement must be built and put in place at the factory, the axle which is split or separated into two parts, being thus specially made in order to admit of the use of his mechanism. No guide is employed to support the spring, nor does the construction admit of the use of a guide, or of the variation even approximating the plaintiff's structure."

While the Anger patent does in fact require the construction of a specially built front axle, it would not, in my opin- [fol. 171] ion, amount to invention to arrange the leaf spring 31 entirely above the axle and connect the ends of the same to the usual perches or spring supports through the intermediation of the coil springs. But whether this is so or not, the construction shown in the Bussing British patent of 1907 and in the Peugeot French patent and in the Cosset French patent, above referred to, are all arrangements which do not require any change whatever in the automobile construction, but merely the substitution of the proposed spiral spring arrangement in lieu of the usual shackles or links which connect the leaf springs to the chassis, or axles. And with all of these prior patents, provision is made for guiding the spiral spring so that it will operate efficiently,

guiding it not in the crude and objectionable way proposed by Thompson, where great friction is encountered and the full advantage of the coil spring is lost, or seriously reduced, but guiding it in a highly efficient way whereby the full quick acting effect of a coil spring may be made use of.

Summarizing what I have above said, I find that the Thompson patent in suit discloses a particular way of utilizing quick acting coil springs in connection with the frictionally retarded leaf springs of Ford cars. The arrangement is one that in my opinion represents nothing but mechanical skill, and not invention; certainly not invention of a high order or of a fundamental character. As I have pointed out, the mechanical construction is such that very great friction is encountered in connection with the operation of coil springs, which are in fact, frictionally retarded, and I am informed and believe that the plaintiff no longer uses the construction of the patent in suit, but in fact has modified it so as to eliminate this friction in order to secure the full benefit of the quick acting coil springs.

[fol. 172] Referring now to the so-called Apco Absorber, made by defendant herein, and illustrated in defendant's Exhibit 2, I find that this is an entirely different arrangement from anything proposed by Thompson in the patent suit. Where this device, instead of using separate guide D, as proposed by the Thompson patent, the usual spring perches or supports at the front axle are employed except that they are reversed; that is to say, the left perch is removed and used at the right and the right perch is removed and used at the left. In the case of the rear axle the rear perches are dispensed with and the main bracket of the absorber is bolted directly to the brake drum flange of the axle. At the left of defendant's Exhibit 2, the arrangement for the front axle is shown, the base 2 being pivotally connected to the perch 2-A, while at the right the arrangement used at the rear illustrated, the base 2 being bolted in place through the bolt 3. With this device, the base offers a firm, substantial support for the lower end of a spring 6, which by reason of its form is known in the art as a beehive spring. At the upper smaller end of this spring is a plate 7 connected by a pivot 8 to a link 5, the lower end of which is pivoted by a bolt 4 to radius links 9, pivoted

to the main bracket 3 on a bearing 9-a. The usual shackles or links which are not shown in this exhibit, connect with the lower end of the rod 5 by the same bolt 4, which connects with the radius links 9. Thus the free end of the leaf springs will be supported by the rod 5, which in turn bears upon the upper end of the bee-hive spring 6 the lower end of which rests upon the base 2, which in turn is supported by the front or rear axle, as the case may be. Any quick, small shocks, therefore, will be absorbed by the bee-hive spring and will not be transmitted to the main leaf springs, precisely as proposed by the various examples in the prior [fol. 173] art, to which I have above referred. By reason of the radius rod 9, the lower end of the link 5 will swing in small arc, as the bee-hive spring is compressed more or less. These radius links are the same in function and operation as the links B of figures 1 and 2 of Bussin's British patent, No. 3385, of 1907, and the radius links F of the Cosset French patent, above considered, and are the mechanical equivalent of the special centering mechanism disclosed in the French patent to Perguecot, above referred to.

The construction used by defendant herein is somewhat similar to that of the Storrie Patent, No. 1,279,035; the links 21 of this patent corresponding with the radius links No. 9 of the Apco device and the shackles 20 of the patent corresponding with the usual shackles which connect the bolt 4 of the Apco device with the end of the leaf spring. The Storrie arrangement, however, differs from the Apco construction inasmuch as a covering or casing is used surrounding the spring and an ordinary cylindrical coil spring is employed instead of a bee-hive spring.

The arrangement adopted by defendant is a very simple, well designed device by which the maximum use is made of the quick acting properties of a coil spring, friction being almost entirely eliminated. The parts which move are not reciprocating parts, as with the Thompson patent, and therefore do not require guides, and since guides are not utilized, friction is reduced to a minimum. Whatever movement takes place, is purely a swinging movement with respect to fixed centers and not a reciprocating movement, necessitating the use of guides or equivalent elements. There is no opportunity for the parts to stick or bind even

under the very severe conditions of use where the shock absorber is only a short distance from the ground and [fol. 174] quickly becomes covered with mud and dust, the presence of which would be fatal to a guide or a guided element.

Furthermore, with the Apco device, the coil spring used of the bee-hive type, does not act in the same way as a plain cylindrical spring, as with the Thompson patent in suit. With the latter form of spring, the response is in accordance with Hooke's law, that is to say, the deflection of the spring is proportional to the force deflecting it. It is because of this law that we have spring scales which move a certain fraction of an inch under a weight of one pound and double that under the weight of two pounds and so on. With a bee-hive spring the response is not in accordance with Hooke's law since the turns of greater diameter are more sensitive and responsive than those of a smaller diameter. For this reason, with the Apco device, the response is an extremely sensitive one and very small minute shocks will be absorbed by the spring due to its large diameter which would not be absorbed by a cylindrical spring, such as proposed in the Thompson patent in suit. Such a spring is practically a rigid body until the shocks affecting it reach a certain minimum, but with the Apco device the shocks which will be absorbed by the spring may extend over a relatively great range.

With the Thompson device, the guide D which projects upwards from the axle is located immediately below the rods which support the front fender, and in practice I am informed, under severe jolts, these fender rods will frequently collide with these guides, resulting in damage to the car. With the Apco device, on the other hand, there is nothing corresponding to the guides D and when the bee-hive spring is compressed, it is moved away from the fender rods, which therefore do not collide therewith. This particular advantage is referred to in the literature of plaintiff [fol. 175] herein (see Defendant's Exhibit 10) as an advantage of their present construction, in which this particular difficulty is avoided, by the following words:

"In the Temco, when the springs compress, the casing telescopes, and thus shortened, the Temco clears every part of the car."

In my opinion the Apco Shock Absorber, manufactured by defendant, is entirely different in construction, mode of operation and in principle from the device of the Thompson patent in suit for the reasons above explained. As I have said, the Apco device is constructed in substantial accordance with the Storrie patent referred to. I am informed and believe that suit on the Storrie patent was brought against the plaintiff herein, the District Court of the United States for the Northern District of Ohio, Western Division, as appears from a copy of the docket entries, bill of complaint and answer, attached hereto as defendant's Exhibit 11. The shock absorber made by plaintiff, and which was alleged to infringe the Storrie patent, utilized the radius links of that patent and not the guides and reciprocating elements of the Thompson patent. In the answer to the complaint in that suit, defendants averred (paragraph 16)—

"that the patent sued on is null and void and is a fraud upon these defendants and the public because the alleged improvements embraced therein, or the material and substantial parts thereof, had been, prior to the alleged inventions thereof by said Storrie, made known and described and illustrated in numerous prior patents,"

including the French patent to Cosset, 441,832, of March 27, 1912, above referred to. I agree that the Storrie arrangement was in fact anticipated by the French patent [fol. 176] to Cosset, as alleged by plaintiffs herein in their answer to the suit on the Storrie patent and that to adopt the Cosset device to the front or rear springs of a Ford car was a perfectly simple and obvious thing to do. Since the defendant in this case is using the Storrie arrangement, I regard the position taken by plaintiff in the suit on the Storrie patent as confirming my own opinion that the arrangement now used by defendant is based entirely upon the prior art and in no way upon the Thompson patent in suit.

Regarding the claims of the Thompson patent in suit, it will not be necessary for me to consider them specifically and in detail. Mr. Newton attempts to do this, but clearly his affidavit is based upon the assumption that the Thomp

son patent is a broad and generic patent, entitled to most liberal consideration. In my opinion this is not so. I agree with the Court of Appeals in the K-W Ignition Company case that it is a narrow patent at the very best, and as I have pointed out, I believe that that Court would not have sustained the patent had the record been a complete one, fully setting forth the prior art. I find that all the claims of the Thompson patent specifically refer to the use of guides and guided elements involving the employment of reciprocating parts, or, in other words, that these claims are drawn specifically to the precise arrangement shown in the Thompson patent. The Apco shock absorber does not use the reciprocating parts and it does not have guides, the two elements being reciprocal. That is to say, when a guide is used it pre-supposes a reciprocating element and when a reciprocating element is referred to it pre-supposes a guide. Therefore, in my opinion, the Apco device does not respond either in language or in substance to the terms of the Thompson patent in suit.

[fol. 177] Second Affidavit of Frank L. Dyer

I have already prepared an affidavit which has been filed in this case, and in which I have considered the Thompson patent in suit, its relation to the prior art, and the relation of defendant's structure thereto. I have been requested to consider a shock absorber known herein as the Edwards absorber, and illustrated in Defendant's Exhibit 39, and in this connection I have read the deposition of Oliver P. Edwards in which the Edwards absorber is referred to. The illustration of the Edwards absorber in Exhibit 39 and the testimony of Mr. Edwards thereon, are not entirely clear as to the specific details of the construction of the device, but it is perfectly clear that the Edwards absorber in its general make-up and in its mechanical construction is the same as the Apco absorber made by defendant herein. In fact I note that Exhibit 39, in referring to the Edwards absorber, states that it has a "familiar" look—evidently because it looks like the Apco absorber with which the public has become familiar because of its success due to the superiority of its design and construction. At best the

Edwards absorber is the same as the Apco absorber, with the addition of a small socalled recoil spring which is located within the main beehive spring of the device and is asserted in the exhibit to improve the operation of the device by absorbing and checking the recoil of the bee-hive spring after it has performed its functions. In my opinion any advantages which might be secured by the use of a small recoil spring are negligible, but admitting that they exist, they merely supplement or add to the operation of the bee-hive spring and do not modify or change the operation thereof.

Like the Apco absorber, the Edwards absorber utilizes a beehive spring, the advantages of which I have pointed [fol. 178] out in my first affidavit. Such a spring does not respond truly to Hooke's Law, but responds over a very considerable range of shocks, the very minute ones causing the beehive spring to flex in its coils of larger diameter, and the heavier ones causing the beehive spring to flex in its coils of smaller diameter, but all of these small shocks, whatever their magnitude, are absorbed by the beehive spring independently of the main leaf spring of the vehicle. A beehive spring such as is used in the Apco absorber, and as is now copied in the Edwards absorber, may be referred to as a self centering spring, that is to say, although the top of the spring may wave or float back and forth resiliently in operation there can be no permanent sidewise deflection of the spring to thus detract from the successful operation of the device. When the spring is moved at its upper end to one side or the other in operation, it always comes back to the center by reason of its inherent stiffness. Such a beehive spring is therefore not only a very successful shock absorbing spring, but it is also a self centering spring, and permits a shock absorber to be made and successfully operated without any caps or covers or guides to center the spring. When such guides are used, as with the Thompson patent, the sole function of the spring is to absorb the small rapid shocks and the spring is prevented from waiving or weaving at its upper end. This necessarily results in wear on the parts, as I have explained in my first affidavit.

With the Apco beehive spring—as with the spring of the Edwards absorber—the spring may not only flex under the

shocks, but may resiliently weave or wave back and forth so as to perform additional shock absorbing functions. [fol. 179] In view of the foregoing, what I have said in my first affidavit as to the relation of the Apco absorber to the Thompson structure, applies to the Edwards absorber. In my opinion the Edwards absorber is entirely different from the Thompson absorber and does not use the alleged invention of the Thompson patent, nor in my opinion can the claims of the Thompson patent, considered in the light of the prior art, be applied to the Edwards absorber.

Affidavit of William Storrie

I have been closely associated with the automobile trade since 1902, first with the Argyll Motors L'td of Glasgow, Scotland, as draftsman and later as their chief designer. Coming to this country in the fall of 1906 I was employed on special work by the Providence Engineering Company and also by the American Locomotive Company of Providence, Rhode Island, in automobile designing. As my special work was mainly on original design, this led me to thing of and conceive new parts and their arrangement, and I have produced many successful inventions. Conceiving a small muffler cutout applicable to Ford cars, which was marketed by the Auto Parts Company of Providence, Rhode Island and sold extensively, I was eager to market some other device and since I had always thought that coil springs could be designed to work well in light cars I began to give this matter consideration. The Ford T. Model Car which had come on the market about the year 1909 was then selling on what was considered to be an extensive scale. I believe that there were as many as seventy-five to one hundred thousand Ford cars made in the year 1912 and a like number in 1913, there probably being over two hundred thousand or more Ford cars in use at the beginning of [fol. 180] the year 1912. As brought out in my testimony in the interference case between the Temco Company and myself over the claims to the shock absorber involved in this case, this matter began to develop in 1912. I was familiar with the design of automobile springs, and their action and to some extent the prior art, so I considered

my original layout for a shock absorber was new and useful. What I desired was to use a coil spring which I did not consider was new in itself or when combined in such way that it would augment the leaf spring, but I did desire to use the coil spring in such way that it would function mechanically correct. To do this I conceived the use of radius links connected to another link coming down through the center of the coil spring. When these were connected to the Ford spring shackles of the Ford car I knew that this combination would work satisfactorily and make the Ford car ride easier. For ornamental purposes and as a dust cover I put a shell or covering over the coil spring. Many of these absorbers were made by me and proved highly satisfactory.

This absorber is shown on the attached Defendant's Exhibit No. 1, "Original Storrie Absorber."

A later development of my design lies in the use of a conical or bee-hive type of coil spring which has special properties, as hereinafter pointed out, and this type with the bee-hive spring is the one now being manufactured and sold by the Apco Manufacturing Company, and I file herewith as an exhibit marked Defendant's Exhibit No. 2, "Apco Absorber" an illustration of the Storrie shock absorber for both the front and rear spring of the Ford car.

I also file herewith a copy of my patent for the Apco shock absorber and have marked it Defendant's Exhibit No. 3, "Storrie Patent in interference with Temco."

[fol. 181] As this highly developed type Apco shock absorber is now on the defensive against the early Thompson patent it becomes a duty to show that they are absolutely different in construction and functioning qualities. The intention of the function of the coil spring in the Thompson patent sued on and of the Apco or Storrie shock absorber was to act as an auxiliary to or to augment the action of the leaf spring of the car to which it was attached. The intention of the function of the spring in the Apco Absorber was to support a load without interference of any elements or forces tending to nullify its functioning properties.

The function of the Thompson spring in the patent sued on is clearly shown to be to resist a load applied at some distance from its own common center, making this a very much indirect action, whereas, the function of the Apco

coil springs is to resist a load applied absolutely on its own common center, making this an absolute direct action. The function of the Thompson spring is to resist a load at a uniform resistance of a uniform scale of deflection per inch, whereas, the function of the present type of Apco spring is to resist a load at a variable resistance of a variable scale of deflection per inch due to the variabled diameter of coils used.

The function of the Thompson spring depends absolutely on fixed stanchions or guides and of sliding sleeves coming into sliding contact with said guides, whereas, the function of the Apco springs is absolutely independent of any fixed stanchions or guides and independent of any sliding sleeves of any description coming into sliding contact with any guides. Of special importance is the fact that due to its constructional form the present Apco spring is absolutely self supporting.

Under side sway which is a vital problem to overcome, the Thompson patent arrangement, due to the load being ap- [fol. 182] plied at some distance outside of the common center of the spring, increases angular pressure between its sliding members and so becomes unpracticable and does not respond to the supposed function of its coil spring, and whereas, due to the angular pressures and the consequent friction generated when the Thompson absorber begins to deflect, a lighter spring would be called for than if there was no friction, while at the end of the total deflection due to the increased friction, a much heavier spring would be called for to overcome this element than would be the case if there was no added friction, and as this is not taken care of in the Thompson patent it can only result in sticking and intermittent action. In the Apco shock absorber, under side sway the absorber remains in its original efficient condition due to the controlling pivotal action of the radius links with the spring center link. The destructive side sway action, so destructive to the working of the Thompson patent, is absolutely overcome in the Apco shock absorber.

In the Thompson patent if an attempt should be made to use a large diameter spring or a bee-hive type of spring as used in the Apco Absorber, it readily will be seen that this would mean that the point where the load would be

applied would have to be still further away from common center of the coil spring, making the device absolutely impractical or nonworkable and against the common sense of any ordinary mechanic.

If these facts were not as I state them,—tending to prove that the device of the Thompson patent sued on is absolutely different in design or mechanical construction and functioning from the Apco shock absorber why did the Temco Company discontinue the manufacture of the original Thompson absorber and manufacture an absorber in which it dispensed with the sliding guides and parts and [fol. 183] employed a link arrangement like the original Storrie absorber and seek a patent on it from the patent office? The real truth of the matter is as I see it that the device of the Thompson patent sued on failed to co-ordinate successfully mechanically the application of a coil spring to the end of a leaf spring. In the Apco shock absorber this problem of co-ordinating all the elements that go to make up the device is absolutely accomplished both mechanically and commercial-. The Temco Company for the reason stated changed its design of shock absorber to what was a practical copy of the Storrie patent and it fought for many years before the patent office and the Court of Appeals to endeavor to obtain an award of priority of invention over the Storrie application.

I shall hereinafter refer to the Thompson application that was involved in the interference with my application which issued into the Storrie patent under which the Apco Company manufactured the Apco absorber, and during the prosecution of which Thompson application but before the Temco Company had knowledge of my application of the Storrie patent, the Temco Company admitted to the authorities at Washington the facts as I have stated them, that is facts to the effect that the device of the Thompson patent sued on and the Storrie shock absorber were different.

I have read the affidavit of J. T. Newton and find that what he claims to be relatively corresponding elements in comparing the Thompson patent sued on with the present Apco shock absorber, is very wide from the absolute facts. I notice that no pains have been taken to mark, show or report with accuracy wherein the various members of the

Apco shock absorber are in conflict with the other end, there-
[fol. 184] fore, covered by the Thompson claims. My attention has been called to several charts used by the plaintiff in the suits against the K. W. Ignition Company; the Halladay Company; and the Forest City Electric Company. I attach hereto said charts which are marked "Defendant's Exhibits 4, 5 and 6, Plaintiff's Original Charts," and it will be seen from these charts that this form of accurate relative comparison was employed by the plaintiff in those cases. It will be seen that the claims are applied to the K. W., the Halladay and the Forest City structures element for element and that element for element each and all of said structures respond to the complete or all the element of the claims of the Thompson patent. It is easy to see why this was not done and could not be done by Mr. Newton in making his comparison between the patent in suit and the Apco absorber, as the elements in question in the Apco absorber absolutely do not exist.

He (Newton) says:

"I find that defendants' device is like plaintiff's patented structure in organization, mode of operation and results";

whereas when the Temco Company was seeking a patent on the Storrie device but without knowledge of Storrie's invention, and before its application was brought into interference with said application of the Storrie patent we find Messrs. Toulmin & Toulmin, plaintiff's counsel, making the following statement of fact and admission when the patent office rejected the claims of the Thompson application on Thompson's patent in this suit on the ground that they were the same in mechanical construction and functional results (see exhibit 7):

[fol. 185] "The difference between the mechanism and the functional results of the present case, and the former Thompson patent is obvious."

How can these two statements be reconciled with one another? I prefer the admission of Temco's own attorneys made before any knowledge of my application which was to interfere in the patent office with the Thompson application and before this suit against the Apco Company had

been brought, that the two contending structures are absolutely different in construction and functioning results, especially so in view of the fact that the patent office accepted this argument of the Temco Company and allowed the claims which claims were afterwards granted to me in my said Storrie patent after the Temco Company had contested the interference proceeding very bitterly, before the examiner of interferences, the Board of Examiners in Chief, the Commissioner of Patents, and the Court of Appeals of the District of Columbia.

I file herewith a certified copy of the record before the Court of Appeals of the District of Columbia, Exhibit 16, and the patent office in said interference proceeding and reproduced and attach hereto papers from the said record showing the application papers and patent drawings of the second Thompson application and the file wrapper contents of the same while the application was pending in the patent office. This exhibit is "Defendant's Exhibit 7 Storrie Thompson interference papers."

Notwithstanding the above admission of the Temco Company, and the failure of Mr. Newton to apply the claims or rather the elements of the claims of the patent sued on to the elements of the Apco structure, as the plaintiff Temco [fol. 186] did in the prior suits against the K. W. Ignition Company, the Halladay Company and the Forest City Company as exhibited by "Plaintiff's original Charts" hereto attached, Newton marks the spring base casting of the Apco shock absorber as 2 in Exhibit 3 and says this represents pins or slides. If the Court will turn to Defendant's Exhibit 2, Apco absorber, which shows in cross section a front and a rear Apco absorber, that is an absorber for attachment to the front spring of the Ford car and an absorber for attachment to the rear spring of the Ford Car, it will be seen that the part 2 is a wide, broad and substantially flat malleable iron casting of a peculiar shape. In the front absorber this casting is pivoted to and free to move pivotally upon the regular Ford spring perch which is shown in dotted line and that this large malleable casting on the rear absorber has a transverse bolt hole 3 whereby the casting may be fastened to the brake drum or axle flange on the rear axle of the Ford car. How these malleable iron castings of the peculiar shape shown can represent

pins or slides is beyond my comprehension. Neither casting moves (except on the front absorber in which the casting is free to move upwardly pivotally on the pivot of the spring perch on the re-bound of the leaf spring of the car) and neither casting is in sliding contact with any other member.

Again, the spring center link of the Apco shock absorber is marked by Newton 3 and called the sliding member. How as a matter of fact this member is a simple connecting link and does not come in contact with or slide on any other member throughout its entire length. How can it be said to slide on anything when it has no sliding contact while in operation. Again, he (Newton) says: "4 is the coiled spring interposed between the axle and the sliding member 3." It is obviously impossible to interpose any- [fol. 187] thing between something that does not exist, as there is no sliding member in the Apco absorber. Again I find on page 5 of the Newton affidavit: 3 indicates "sliding members," while on page 6, 3 indicates "hangers" and again "leaf spring hangers." Again he says on page 6, "Said hangers being guided therein by stanchions 2," while on page 5, 2 is represented as "pins or slides," whereas, as stated above, number 3 or the spring center link was called "sliding member." Again on page 6, 2 is now represented as a stationary guide and what was termed number 3 is now number 4 (rear) and called a sliding hanger adapted to slide on the stationary guide 2. This is absolutely contrary to fact as in the Apco shock absorber while in operation this spring center link 4 does not come in contact with the member marked 2 as the position of the center link is controlled by the radius link.

In applying the present Apco shock absorber to the front axle of the Ford car no part nor member of the Apco absorber passes through the axle, but the existing spring perches already in the axle of the Ford car are utilized for attaching the absorber, the absorber being pivoted to the spring perch through the eye of the perch by means of which the perch normally connects with the spring shackle of the Ford car. This is not so in the case of the Thompson patent sued on. In the Thompson absorber it is necessary to discard the spring perches. In the Apco absorber

the device is more an attachment to the existing parts of the Ford axle and it is unnecessary to discard the front perches. In the Apco absorber when the rear absorber is applied to the Ford spring the absorber is attached by means of a bolt which passes through the brakeflange of the Ford axle into the hole in the flange caused by the removal of the rear spring perch. However, the rear spring [fol. 188] perch is a short member not connected to the radius rods of the car. It is also necessary to remove the rear spring perch from the Ford car in applying the Thompson absorber to the rear Ford spring.

When the interference proceedings in the patent office were instituted between the Thompson application and mine, the applications of one J. A. Williams of the K. W. Ignition Company and one Voight of California became involved in the interference. I later granted a license under my rights and transferred my rights to the K. W. Ignition Company under a mortgage arrangement. After losing out in the interference the plaintiff herein began selling its shock absorber as low as $10 a set and this low price practically destroyed my business so that I was forced to discontinue, or rather stop, the manufacture of shock absorbers. However, I retained a license under the Storrie patent and shortly before the manufacture of the present Apco absorber by the Apco Manufacturing Company I received a license back from Mr. Williams with the right to license the Apco Company.

I am not directly or indirectly connected with the K. W. Ignition Company, the Halladay Company or the Forest City Electric Company nor with any of the officers or stockholders of those companies.

I designed the instruction sheets which are used by the Apco Manufacturing Company for the installation of its absorbers on Ford cars and such instructions sheets are substantial copies of instruction sheets used by me years before the present manufacture of the Apco shock absorbers, being modified in respect only that the original Apco absorbers made by me were not mounted on the original spring perches of the car but required the removal of the said spring perches for both the front and rear springs instead of only the rear spring. Such instruction

[fol. 189] sheets were prepared without any knowledge of the existence of instructions sheets of the Temco Company.

That eight years ago, namely, on March 1st, 1916, I received from Toulmin & Toulmin a letter stating that the Thompson patent had been sustained against the K. W. Ignition Company and threatening to sue me for the manufacture of the Storrie shock absorber unless I adjusted the matter with them. This letter, which was obviously written to ascertain whether or not I would grant a license under my patent involved in the Storrie and Thompson interference, to the Temco Company referred to the interference as a controversy which could at the same time, be settled with the question of the alleged infringement by me of the Thompson patent and the letter ended with a request for a prompt reply so as to know whether or not infringement suit should be instituted against me. Immediately upon receipt of this letter, namely, on March 4th, 1916, I answered this letter assuring Mr. Toulmin that "The matter I agree, is of much importance to the Temco Electric Motor Company and myself and your suggestion to make some settlement on the various issues of this patent interference seems reasonable and business-like." I then asked whether or not the decision in the K. W. case was a final one and stated that on account of the fact that the business done by me was mostly dependent upon my own efforts, it would be inconvenient to go to Dayton to discuss the situation. In reply to my letter of March 4th, 1916, on or about the 10th of March, 1916, I received from Messrs Toulmin & Toulmin a letter dated March 7th, 1916, in which a statement was made that the Temco Company had directed Toulmin & Toulmin to proceed against me at once unless a settlement could be made. In that letter Mr. Toulmin stated "If you [fol. 190] do not come forward at once and make some equitable arrangement in adjustment of the question, we shall be forced to sue some infringer who is selling your absorber in this territory and where the suit would be less expensive to the Temco Company than to go away off to New England. We would regret very much to have to do this but we are under instructions to take prompt action. Unless we hear from you at once with a view to settlement, we shall be forced to bring suit. Let us have an early reply from you and settle the matter in a way that will be least expensive

and troublesome to all parties." On March 10th, in reply to Mr. Toulmin's letter of March 7th, I stated to him that I was a stranger to the claims of the Thompson patent, having never seen a copy thereof, and that I would take the matter up with a patent attorney and have him look up the Thompson patent and find out what the claims covered.

After investigating the Thompson patent and examining the papers in my interference with the same patentee, Mr. Thompson, who was seeking in the patent office this patent for the very shock absorber I had been manufacturing and finding that Messrs. Toulmin & Toulmin had represented to the Commissioner of Patents that the absorber of the second Thompson application was different in construction and functional results from the first Thompson patent in this suit, I accepted the statement of Toulmin & Toulmin in the application papers of Thompson and concluded that the threat against me for infringement was merely an effort to intimidate me so as to obtain a license under the rights growing out of my application in the patent office and success in the interference at terms advantageous to the Temco Company. I was and have been, fortified in this conclusion [fol. 191] from the fact that the Temco Company never saw fit to sue me and never saw fit to bring a suit against the Apco Company until just recently.

The decision of the examiner of interferences in the patent office awarding priority of the invention to me as against the said Thompson who has signed his rights to the plaintiff, was rendered October 8th, 1915, and this decision was affirmed by the Board of Examiners in Chief, on appeal in March, 1916. Thompson again appealed from the decision of the Board to the Commissioner of Patents who, on May 2nd, 1916, affirmed the decision of the Board. Thompson then again appealed to the Court of Appeals of the District of Columbia, who, on the 23d day of April, 1917, rendered the opinion hereto attached (page —) as Defendant's Exhibit 8, Court of Appeals Decision, Storrie Interference, sustaining the decision of the Commissioner of Patents as against Thompson.

The interference proceedings between Mr. Thompson and myself were split up into two interference cases but there was a stipulation in the cases that the record in the first case, which I have mentioned, should be used in the Com-

panion case. After all the tribunals of the patent office had decided that I was the inventor of the shock absorber instead of Mr. Thompson, in both interference cases, and after the Court of Appeals had rendered a decision in my favor in the first case, Mr. Thompson then took an appeal from the Commissioner of Patents in the Companion interference case, which involved the same record as stated and as a result of that appeal the Court of Appeals of the District of Columbia rendered a decision in my favor, as exhibited by Defendant's Exhibit 9, Second Court of Appeals Decision, Storrie Interference, attached hereto (page —). [fol. 192] It will be seen from the above general statement of the history of the interference proceedings between Mr. Thompson and myself, that having failed to obtain from me a license to manufacture shock absorbers under my patent rights, the Temco Company made a determined effort to re-open the whole interference before the Court of Appeals of the District of Columbia in the hope of obtaining the patent for the device which I was manufacturing.

AFFIDAVIT OF THOMAS F. WILSON

I am President and Treasurer of the defendant corporation. My residence is at Cranston, Rhode Island, a suburb of Providence, Rhode Island. The manufacturing plant and main office of the defendant corporation is located at Providence, Rhode Island. The Apco Manufacturing Company manufactures various accessories for use on automobiles, principally Ford cars.

Prior to May 1917, I manufactured and sold automobile accessories and in May 1917 the defendant corporation was incorporated under the laws of the State of Rhode Island. From about the year 1910 until the year 1917 my business was carried on under the name of Auto Parts Company.

I have known William Storrie, the patentee of Patent No. 1,297,035, under which the defendant company has been manufacturing its shock absorbers for Ford cars, since 1910 and Mr. William Storrie has been connected with me and with the defendant corporation as an engineer, continuously from 1910.

During the year 1914 William Storrie manufactured for me under his said patent Ford shock absorbers which I marketed under the name of Apco, but from 1914 until 1918 [fol. 193] neither I nor the defendant corporation manufactured or sold these absorbers; the said William Storrie during the years 1914 until 1918 manufacturing said shock absorbers under the name of the William Storrie Company but also under the trademark Apco which had been previously applied to this type of absorber in 1914 by me. The defendant corporation was formed in May, 1917, but it was not until the year 1920 the defendant started to manufacture shock absorbers for Ford cars under the claims of the said Storrie patent, under a license from said William Storrie, and the defe*d*endant corporation has continued to manufacture and sell its shock absorbers under said license arrangement.

The form of the Storrie absorber sold by the defendant during the year 1914 and those manufactured and sold by Storrie from the years 1914 to 1918 differed from the structure of the present type of the defendant Storrie shock absorber alleged in the bill of complaint to be an infringement of the Thompson patent, in that the coil spring of the shock absorber was a narrow straight sided spring whereas, the coil spring of the present absorber is a relatively broad or wide conical or beehive spring.

At the time that the defendant started to sell or manufacture and sell Ford shock absorbers under the Storrie patent, I had no knowledge of the fact nor to the best of my information and belief, did any other officer or stockholder of the defendant corporation have any knowledge at the time, of the Thompson patent in suit and it was not until the fall of the year 1922 when the plaintiff sued the defendant corporation jointly with the Pennsylvania Rubber & Supply Company, at Toledo, Ohio, was the defendant informed of the Thompson patent in suit. The suit of [fol. 194] the plaintiff against this defendant at Toledo, Ohio, was dismissed against this defendant on the ground that the defendant was not a resident of the district and the plaintiff had failed to prove infringement by the defendant in the district and a decree by default was entered against the Pennsylvania Rubber & Supply Company. The defendant was never otherwise notified of the alleged in-

fringement of the Thompson patent. Since the entry of the default decree in the Pennsylvania Rubber & Supply Company case the plaintiff has sued several other distributors and dealers handling the defendant's shock absorber and has obtained consent or default decrees therein without any contest of the case or cases on the merits. The defendant has never directly or indirectly, defended any suit at law or in equity by this plaintiff against any defendant in any case whatever and it has not been, and is not, a party directly or indirectly, to any of the cases or litigations involving the Thompson patent in suit. I have not, nor has the defendant company to my knowledge, ever written the plaintiff company or purchased any of the plaintiff's shock absorbers directly or indirectly, from the plaintiff or any of its dealers.

The defendant company has always sold its Apco shock absorbers under its own trade name Apco, and it has never represented its absorber as the absorber of any other concern; it has never imitated the appearance of the plaintiff's shock absorber or of any of the literature or advertisements or instruction sheets of the plaintiff in any way whatsoever. I file herewith as Exhibit "A" one of the defendant's regular advertising circulars which is typical of all of the defendant's advertising and I also file herewith as Exhibit "B" the defendant's instruction sheet as circular which is [fol. 195] sent with the absorbers. The instruction sheet which was designed by the defendant without any knowledge of the plaintiff's instruction sheet, is substantially the instruction sheet originated by William Storrie without any knowledge of the plaintiff or the plaintiff's shock absorber and in the days of the early manufacture of the Storrie shock absorber. I have read the bill of complaint filed in this case in which the plaintiff accuses the defendant of imitating its literature and instruction sheet and otherwise engaging in unfair competition, and I unhesitatingly condemn such allegations in the bill of complaint as being deliberately and falsely made by the plaintiff. The defendant has never cut prices or determined the selling price of its product in view of any prices of the plaintiff for the plaintiff's shock absorber. The defendant has never directly or indirectly, offered it- shock absorbers as and for the shock absorbers of the plaintiff or otherwise engaged in any un-

fair act or conduct. The defendant has always taken great pride in its product and trade name and rights and has been ever zealous to maintain its reputation for honesty and fair dealing in the trade.

The defendant company is informed and deponent believes, that the plaintiff herein has published to the trade and notified the defendant's dealers and distributors that the plaintiff has obtained a decree against the Apco Manufacturing Company at Toledo, Ohio; said notices being so worded or phrased as to give the trade the impression that the Thompson patent in suit was sustained against the defendant and the defendant found to be an infringer, whereas, the facts are no decree has ever been entered against the defendant nor is there any suit pending against the defendant by said plaintiff other than this present suit in the District Court for the Northern District of Georgia, and that by reason of said notices and in view of the rights [fol. 196] of the defendant in the premises, the defendant has suffered and is suffering irreparable injury and damage.

AFFIDAVIT OF J. T. NEWTON

I reside in Washington, D. C., and by profession am a patent attorney; I was formerly connected with the United States Patent Office in various capacities, as Examiner, Assistant Commissioner of Patents and Commissioner of Patents, and that my connection with the Patent Office covered a period of thirty years.

I further state that I have examined and believe that I understand the patent in suit No. 1,072,791, issued September 9th, 1913, by the United States Patent Office on the application of Ralph P. Thompson and William S. Thompson.

The patent in suit relates to improvements in automobiles, and has for its object a device for absorbing shocks in order to make the car more easy riding and to arrange the spring elements in series and of such a character as to be out of synchronism with each other.

A leaf spring consisting of a series of flexible blades, is ordinarily employed in automobiles to absorb the shocks

instead of permitting the effect of the shocks to be transmitted to the body of the automobile and the persons in it.

As such a composite spring flexes, the blades slide upon each other somewhat. This causes friction and retards the action of the spring, which results in an excess amount of shock reaching the body of the automobile, particularly in Fords, for which the absorber of the patent in suit was designed.

[fol. 197] On the other hand a coiled spring is not materially handicapped by any question of time requisite for its action.

A leaf spring is a slow acting spring and a coiled spring is a quick acting spring.

The inventors of the patent in suit, realizing the actions of these two kinds of springs, arranged a leaf spring under the body, to act in the usual manner and then interposed coiled springs between the axles and the ends of the leaf springs. The coiled springs and the ends of the leaf springs, not having the same periodicity of action, it follows that it would be impossible to pass certain shocks completely through them, as the quick acting springs may completely absorb the shocks before they can reach the slow acting springs, or before the slow acting springs can completely respond. Some of the shocks may, therefore, never reach the slow leaf springs, and such shocks as do reach the leaf springs may come to them in very much modulated form.

The following is found in the specification of the patent in suit:

"A further object is to separate the spring element into sets of members, each set acting in series, but in which a difference exists between the members of each set in the time of compression and recoil, for the purpose of causing the spring movement to have the nature of a series of pulsations, out of synchronism with each other, and therefore causing to be absorbed within the spring element itself, vibrations that would otherwise be transmitted to the car frame.

"We accomplish this by the use of the slow acting friction retarded leaf spring of common construction, and combining in action with it, the quick acting coiled spring, together

[fol. 198] with devices which render the mechanism efficient and durable." (P. 1 specifications, lines 15-31.)

The specifications then proceeds to describe the particular form of the invention illustrated in the drawing. Looking at the drawing, A indicates the usual front leaf spring disposed over the front axle and having the body of the car secured to its center; D indicates the standards projecting up rigidly from the axle; C represents a spring hanger moving vertically with respect to the standards; B indicates shackles that connect the outer ends of the leaf springs with the hangers C; and G shows the coil springs for supporting the hangers C and furnishing resilient supports for the hangers.

With this construction the first effect, as the axle is bumped upward, is to compress one or the other of the coil springs, or both of them. The coil springs act quickly to absorb the shock, and any that is not absorbed by the coil springs will pass on to the leaf spring and much or all of it is absorbed by the flexing of the leaf spring.

Figure 4 of the patent drawings illustrate the arrangement of the rear spring K. The standard D is mounted in the axle flange J, instead of directly on the axle as is the case with the absorber used for the front spring. However, the mode of operation of the coil springs, the leaf spring and the various parts and the result are the same.

Briefly stated, coil springs are disposed between the axles and the ends of the leaf springs; the ends of the leaf springs are attached to vertically moving members; these vertically moving members are guided by standards carried on the axle; and the coil springs are interposed between the axle and the vertically moving members.

[fol. 199] The specification of the patent in suit further states:

"The action which takes place in our spring suspension when the vehicle is in motion is as follows:—Shock to the road wheel is absorbed more rapidly by the quick acting coiled spring than by the slow acting friction restrained leaf spring. The result is that shock to the road wheel is first absorbed by the coiled spring, and therefrom is transmitted to the body of the car and the occupants through the slow acting leaf spring. As the compression

and recoil of the leaf spring is not synchronous with that of the coiled spring the recoil of the coiled spring begins to take place before the full effect of shock to the road wheel can be transmitted through the leaf spring to the body of the car. This see-sawing action, as it were, between the quick acting coiled spring and the slow acting leaf spring causes a large portion of the effect from vibration to be nullified by the action of one and the reaction of the other of these springs taking place simultaneously, thus absorbing within the spring element the sharper vibrations, thereby making the car more easy riding." (P. 1 specification, lines 84-108.)

I have examined Plaintiff's exhibit 2 (Two), being the specimen of defendant's device referred to in the affidavit of Thomas A. Lind, and I have examined Plaintiff's Exhibit No. 3, illustrating defendant's device, in comparison with the patent in suit, and find that the Plaintiff's Exhibit No. 3 correctly illustrates defendant's shock absorbers involved in this suit and that defendant's shock absorbers are substantially like the exemplifying structures shown in the patent in suit, the differences being in structural de- {fol. 200} tail and not in matter of substance. I find that defendant's device is like plaintiff's patented structure in organization, mode of operation and result, and that defendant's Apco shock absorbers are identical in construction, mode of operation and result with the "Apco" shock absorbers held by Judge Killits and Westenhaver to infringe the patent sued on herein in the suit of this plaintiff against the Pennsylvania Rubber & Supply Co., in the Northern District of Ohio, Western Division. I further state that said Apco shock absorber held to infringe by Judges Killits and Westenhaver are identical in construc- absorbers held to infringe the patent sued on herein in the suits of this plaintiff against the I. J. Cooper Rubber Co., in the Unted States District Court for the Southern District of Ohio, Western Division, and in this suit against the Belknap Hardware & Manufacturing Co., in the United States District Court for the Western District of Kentucky. Judge Sater granted the injunction in the Cooper case and Judge Moorman in the Belknap case.

Said "Apco" shock absorbers held to infringe by Judges Killitz, Westenhaver, Sater and Moorman and the shock

absorbers complained of herein are all correctly illustrated in Plaintiff's Exhibit No. 3.

For convenience I shall apply several of the claims in suit to defendant's structure, using for that purpose the illustration of defendant's device shown in Plaintiff's Exhibit No. 3. This exhibit states that the shock absorbers are for Ford cars.

Claim 1 reads:

"1. In automobile construction, the combination of a non-rotating axle for the ground wheels, of pins or slides at- [fol. 201] tached to and upwardly projecting from said axle, sliding members for said upwardly projecting pins or slides, and a coiled spring interposed between the axle and the sliding member, leaf springs arranged transversely of the car and above the axle and attached at their middle portion to the chassis frame and linked at their outer ends to the sliding members."

Defendant's device fully responds to this claim. Its shock absorber is for use on a Ford Car, which has a non-rotating axle for ground wheels. In Plaintiff's Exhibit No. 3, the numeral 1 in the left hand cut, marked "Front," indicates the non-rotating axle for the ground wheels, 2 represents the pins or slides attached to and upwardly projecting from said axle, 3 indicates the sliding members for said upwardly projecting pins or slides 2, and 4 is the coiled spring interposed between the axle 1 and the sliding member 3, 5 indicates the leaf springs arranged transversely of the car and above the axle 1 and attached at their middle portion to the chassis frame and linked (by the links 6) at their outer ends 7 to the sliding members 3. The springs of Ford cars are attached at the middle portion to the chassis frame. One of these shock absorbers is mounted near each end of the axle and the leaf springs are supported at their ends by these two absorbers. I find that the defendant's device fully responds to claim 1, because the organization, mode of operation and result are alike.

I also find that defendant's device responds to claim 3 of the patent in suit. It reads:

"3. In automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to

the road wheels, the combination of upright stanchions with the axle of the ground wheels, said stanchions being at [fol. 202] tached to the outer ends of said axle, leaf springs extending above the axle and between the stanchions, and supporting the chassis frame the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame, hangers for the outer ends of said leaf springs, said hangers having vertical movement and being guided therein by said stanchions, and coiled springs interposed between said leaf spring hangers and said axle of the ground wheels."

I find that defendant's device also responds to this claim. Referring to Plaintiff's Exhibit No. 3, which illustrates defendant's device, we find 4 in the left-hand cut, marked "Front," indicates the coiled spring. There is a shock absorber at each end of the axle and hence there are coiled springs and they are used auxiliary to leaf springs, indicated by the numeral 5, for absorbing shock to the road wheels. There are upright stanchions 2 in defendant's device on the axle 1 of the ground wheels, said stanchions being attached to the outer ends of said axle 1. Defendant's device also has leaf springs indicated at 5 extending above the axle 1 and between the stanchions 2. Only one stanchion is shown in the cut, but there is one at each end of the axle. These leaf springs 5 support the chassis frame, and the stanchions 2 are adapted to limit the end motion of the leaf springs 5 and thereby prevent side sway of the chassis frame. I also find in defendant's construction hangers 3 for the outer ends 7 of the leaf springs 5, said hangers having a vertical movement and being guided therein by said stanchions 2, and I find coiled springs 4, there being one at each end of the axle, interposed between said leaf spring hangers 3 and said axle 1 of the ground wheels.

It will thus be seen that defendant's device is like the [fol. 203] structure defined by claim 3 in organization, mode of operation and result, and that it responds to this claim.

Defendant's device also responds to claim 4 of the patent in suit. It reads:

"4. In an automobile, the combination with a leaf spring, a stationary guide on the axle flange adjacent to the rear brake drum and a sliding hanger adapted to slide on the said stationary guide, a coiled spring adapted to yieldably support said hanger, the said hanger being adapted to carry the end of the leaf spring."

This claim has particular reference to the absorber used in connection with the rear spring, and defendant's device is shown in the right-hand cut, marked "Rear," on Plaintiff's Exhibit No. 3. The leaf spring is indicated at 1 and the stationary guide 2 is mounted on the axle flange 3 adjacent to the rear brake drum. Defendant's device also has the sliding hanger, indicated at 4, adapted to slide on the stationary guide 2. Defendant also has the coiled spring, indicated at 5. This spring is adapted to yieldably support said hanger 4 and this hanger 4 is adapted to carry the end 6 of the leaf spring 1.

It will thus be seen that defendant's structure is like the structure of claim 4 in organization, mode of operation and result, and responds to this claim.

I file herewith, and mark Plaintiff's Exhibit No. 5, a photostatic print of Plaintiff's Exhibits Nos. 3 and 4. This Exhibit No. 5 is identical with Plaintiff's Exhibit No. 7, on the injunction motion, in the suit of this plaintiff against the Pennsylvania Rubber & Supply Co., in which Judge Killits and Westenhaver held the patent sued on herein to be infringed by the "Apco" shock absorbers, which shock absorbers are identical in construction, mode of operation [fol. 204] and result with "Apco" shock absorbers of the defendant herein. Defendant's said "Apco" shock absorbers are shown in Plaintiff's Exhibit No. 3 and The K. W. Ignition Co. absorber is shown in Plaintiff's Exhibit No. 4. This K. W. absorber was held to infringe plaintiff's patent in suit by the Court of Appeals for the Sixth Circuit in the suit of this plaintiff against the K. W. Ignition Co. Lines have been drawn from defendant's shock absorber to the corresponding part of the K. W. absorber. These absorbers are the same in construction, mode of operation and result. Reference numerals corresponding to those applied

to the left-hand cut in Plaintiff's Exhibit No. 3 have also been applied to this cut of the K. W. device in Plaintiff's Exhibit No. 5.

It will be seen from Plaintiff's Exhibit No. 5 that in both defendant's device and the K. W. infringing device there are the upright stanchions 2 on the axle 1 of the ground wheels, said stanchions being attached to the outer ends of said axle 1. Both absorbers also have the leaf springs 5 extending above the axle 1 and between the stanchions 2. In Plaintiff's Exhibit No. 3 and Plaintiff's Exhibit No. 4, as also in Plaintiff's Exhibit No. 5, only one end of the axle is shown, but in practice an absorber is used at each end of the axle. These leaf springs support the chassis frame, and the stanchions 2 are adapted to limit the end motion of these leaf springs and thereby prevent side sway of the chassis frame. In both structures there were also present the hangers 3 for the outer ends 7 of the leaf springs 5, said hangers having a vertical movement and being guided therein by said stanchions 2. Coiled springs 4, one at each end of the axle, are interposed between the leaf spring hangers 3 and the axle 1 of the ground wheels.

[fol. 205] I have applied claim 3 of the patent in suit to defendant's device and the K. W. device for the purpose of illustrating that both of these devices are alike in organization, mode of operation and result, and that defendant's device responds to this claim 3, as did the K. W. device, which the Court of Appeals held infringed this claim.

I find that defendant's device responds to claims 1, 3, and 4 in organization, mode of operation and result.

I file herewith, and mark Plaintiff's Exhibit No. 6, a true and correct print of Plaintiff's Exhibit No. 8 on final hearing in the suit of this plaintiff against the Pennsylvania Rubber & Supply Co., in the United States District Court for the Northern District of Ohio, Western Division. This Exhibit 6 correctly represents plaintiff's device and all of the devices that have been involved, and that have been held to infringe, in the various suits on the Thompson & Thompson patent No. 1,072,791, sued on herein. I have compared Plaintiff's Exhibit No. 6 with the devices heretofore held to infringe the patent sued on herein, and this Exhibit No. 6

correctly illustrates such infringing devices. Fig. 7 of this Exhibit No. 6 correctly illustrates the "Apco" device involved in the suit against the Pennsylvania Rubber & Supply Co. and in the suits against the I. J. Cooper Rubber Co. and the Belknap Hardware and Manufacturing Co., and correctly represents the "Apco" device of the defendant herein. Judges Killits, Westenhaver, Sater and Moorman, in the suits against the Pennsylvania Co., the Cooper Co., and the Belknap Co., held the "Apco" device shown in Fig. 7 to be an infringement of the patent sued on herein.

Plaintiff's Exhibits Nos. 3, 4, 5 and 6 herein are identical with Plaintiff's Exhibits Nos. 3, 4, 5 and 6, respectively, in the Cooper and Belknap suits. Plaintiff's Exhibits Nos. [fol. 206] 3, 4 and 5 herein are identical with Plaintiff's Exhibits Nos. 4, 6 and 7, respectively, on the injunction motion in the Pennsylvania suit, while Plaintiff's Exhibit No. 6 herein is identical with Plaintiff's Exhibit 8 on final hearing in the Pennsylvania suit heretofore referred to.

Second Affidavit of James T. Newton

I have carefully examined the affidavits of Storrie and Dyer together with the attached exhibits which have been filed in this case. I beg to advise the Court in the light of my knowledge as an expert in patent matters and in the light of my experience as an official and principal administrator of our patent system as to a number of matters which are in error in the Dyer and Storrie affidavits, particularly in the light of the adjudication on the same subject matter of the Court of Appeals for the Sixth Circuit.

Storrie on Page 6 of his affidavit makes a point that the front shock absorbers of the Apco have some pivotal movement on the axle. This does not modify the question of infringement by the front shock absorbers of Apco. Indeed Judge Westenhaver in his opinion in the case of the Temco Electric Motor Company against the Forest City Electric Company, et al., in Equity 228 specifically held that such a pivoting did not avoid infringement. In that case the defendant's shock absorber was pivoted for rocking movement. The Court said:

"Defendant's device differs in that the aperture, through which the hanger operates so as to accommodate but limit the extension and contraction of the leaf springs, is en- [fol. 207] larged, permitting the hanger and casing to be tilted, and is supported by a ball-bearing joint. Notwithstanding these changes, the same function is performed and the same result is realized thereby as by the radius link. They may do so in a somewhat different manner, but the changes are colorable merely and do not produce a new and different combination, nor avoid infringement."

As to the contention that the difference in the detail form of the helical spring is of any importance, I beg to advise the Court that all of these springs used by the various defendants and by the plaintiff come within the classification of helical springs. The patent is not limited in this particular either in its own terms or by the interpretation of the Courts, including the Court of Appeals, so that no matter what is the detail form of the spring used infringement cannot be avoided. It is merely a colorable immaterial difference which an infringer has selected in his attempt to deceive the Court.

As to the contention that the movement of the spring in the shock absorber of the patent in suit is not a free and independent movement, that is not true, because Judge Clark and the Court of Appeals specifically found in the case of the Temco Electric Motor Company vs. K. W. Ignition Company, et al., in Equity 260, that the device of the patent in suit made like the drawings in the patent in suit in the minutest detail, was successful immediately upon being shown to the public and resulted during the first year of sales of nearly $14,000 sets of shock absorbers and a net profit of $100,000.00. Judge Clarke said:

"Assuming the fact to be, as the evidence quite clearly shows is the fact, that the plaintiff's device does really con- [fol. 208] tribute to the comfort of riding in motor cars, to which it was applied, especially in Ford cars, we have in addition in this case the consideration that the device when put upon the market met with such immediate and great sales that they cannot just be attributed to unusual advertising or other creating of a market."

The Court of Appeals said:

"The merit and simplicity of the Thompson device were immediately recognized and it promptly went into extensive use. Salesmen, before seeing it and without the use of any advertising matter, found many ready buyers. The demands of the trade exceeded the ability to supply it."

Furthermore, the device of the K. W. Ignition Company as shown in defendant's Exhibit No. 4, had the same arrangement of parts as the present Apco device, so that if the Apco device has this so-called "independent movement" refererd to by Storrie, the K. W. Ignition device also had it and was still an infringement. The same remarks apply to the question of angular pressure. An observation of the Apco device for the front of the car will show that lugs are provided on the base upon which the spring rests to form a bearing for the vertical sliding member to take up any angular pressure, just as in the patent in suit.

As to the complaint that I had not specifically applied the claims to the Apco structure, this statement is incorrect, because I have done so with great detail on plaintiff's Exhibit No. 5, where I have indicated similar parts in the K. W. Ignition device and in the Apco device, as the K. W. Ignition device has already been held by the Court of Appeals of the Sixth Circuit to embody all of the features of the patent in suit.

[fol. 209] I attach hereto as Plaintiff's Exhibit 13 a chart in which two of the claims have been applied to the Apco device. The other claims are equally applicable.

I find upon examination that it is claimed that in the file wrapper of the second Thompson application that the attorneys for Thompson distinguished between the patent in suit and the Thompson radius link device. In the first place this was proper, because the Thompson first patent was the parent patent which was specifically embodied in the radius link application as already held by the Court of Appeals of the Sixth Circuit. In the patent law a parent patent may cover a number of different structures which differ from its disclosures in detail. As will be seen in a certified copy of the record in the Court of Appeals for the Sixth Circuit, which is attached hereto as Plaintiff's Ex-

hibit 14, that at pages 27-28-34-27-28-96 and in Defendant's Exhibit U, this whole question of the various link interferences with Storrie was before the Court of Appeals, fully discussed and disposed of as immaterial.

In the second Thompson application it is specifically stated that the radius link form was "an improvement over a construction disclosed in patent granted jointly to himself and W. S. Thompson, No. 1,072,791, Sept. 9, 1913."

Furthermore, in the second Thompson application he specifically states that—"the object of the present invention of the prior patent, is of the general type disclosed sessing certain advantages not possessed by the construction of the prior patent, is of the general type disclosed therein,—i. e., the construction is such that shocks are to a great extent absorbed and prevented from being transmitted to the body of the vehicle by the co-operation or in-
[fol. 210] teraction of non-synchronous resilient elements including a leaf spring and a pivoted and auxiliary coil spring, whose vibrations are more rapid than the leaf spring.

In other words, this was the difference referred to by the attorneys, which was merely one of improvement for ease of manufacture and did not remove the structure from within the boundaries of the prior and broader patent, as the Court of Appeals of the Sixth Circuit has already found, and as Judge Clark, Judge Westenhaver and Judge Killets have also found (see page 17, Defendant's Exhibit 7).

On page 19 of Defendant's Exhibit 7 the applicant, Thompson, states that the "improved suspension" has the "advantage that side swaying of a car minimized" which was one incidental advantage of this detail improvement of the original parent patent now in suit. It will therefore be seen that the distinction drawn by the attorneys was the usual one of an improvement over a parent patent, and this view the Court of Appeals of the Sixth Circuit in this case has already taken, and found that the device of the K. W. Ignition Company has exactly similar construction to the Apco using the radius link and as was within all the claims of the present patent in suit. In plaintiff's Exhibit 5 I have drawn lines between the corresponding parts of the K. W. Ignition device and the Apco device, so that the Court could see the identical nature of the two shock ab-

sorbers manufactured by the K. W. Ignition Company and the Apco Company, which I think will materially lighten the burden of this Court in passing upon the details of this matter.

Turning to the various prior art patents discussed by Mr. Dyer or cited in the answer, I beg to advise the Court that none of these patents differs in any way from those before [fol. 211] the Court of Appeals or before the Court in other cases in which this patent has been involved.

Dyer alleges that the only patents before Judge Clarke at the trial of the K. W. Ignition suit were patents relating to horsedrawn vehicles. This statement is not correct, because a large number of the patents discussed before the Court were automobile patents. In fact, the principal United States patent discussed by the defendant, which Dyer relies on in this case as the main United States patent, was an automobile patent. Of the patents especially mentioned before Judge Clark, as will be seen upon examination of the record, pages 83 to 96 (Plaintiff's Exhibit 14), 16 of the total number of 21 patents were automobile patents—or nearly three-fourths of them.

As to the British patent to Bussing No. 3385 of 1907, Dyer makes the point at the bottom of page 10 and top of page 11 of his affidavit—"that if this British patent to Bussing had been given the Court in the original K. W. Ignition Company case when the patent was sustained by Justice Clarke 'though not without misgiving,' a different conclusion would have been reached. In view of this Bussing patent I do not see the slightest degree of invention in the Thompson patent." He bases his statement upon the fact that the Bussing British patent which he states shows constructions which did not appear in the German patent of Bussing, which he admits was in the K. W. Ignition case.

Mr. Dyer has not been accurate or correctly advised the Court, because the French patent to Bussing of 1907, No. 374,364, was pleaded by the defendant (see page 12, record, plaintiff's Exhibit 14). I attach a copy of this patent and mark it plaintiff's Exhibit 15. It will be seen that it is an exact duplicate of the British Patent to Bussing which Dyer [fol. 212] now relies upon. This German patent to Bussing discloses a built-in construction on an automobile. The leaf spring is placed on the axle and receives the first

shocks, which is directly contrary to the arrangement in the patent in suit. The tension spring is not attached above the axle but is attached to the frame of the vehicle. The springs are not co-ordinated, so that the quick acting spring will break up the shocks, which are then flattened out or dampened by the slow acting leaf spring. It does not correspond in any way with the patent in suit, particularly as described by Judge Knapper in 283 F. 875.

The same remarks apply to the German patent to Bussing. As to the patent to Peugeot 481,997, the same remarks apply to it, as its mechanical construction discloses almost the identical construction in patents already pleaded in the K. W. Ignition suit, such as Pernot 371,231, Le Fevre 430,135 (both French patents) and a British patent Romabillo 30,419.

This Peugeot patent adds nothing to the art.

In addition thereto both Bussing and Peugeot patents do not show any means of installing a detachable structure on the existing car, such as provided for by Thompson. This is a feature which has made Thompson available to every person owning a Ford car.

As to the French patent to Cosset, the same remarks apply to it. In addition, the coil spring is placed between two leaf springs, thus still further destroying the result which Thompson secures. Thompson firmly bases his coil spring on the axle, where the shocks are forced to go thru the coil spring and thus be broken up before getting into the leaf spring, while in all these patents cited by Dyer the shocks go into the leaf spring which amplifies them by the whipping of the leaf spring and increases the vibration in the car body. The Gosset patent is almost a duplicate of the one to Romabillo, 30,419, which was in the K. W. Ignition case.

[fol. 213] As to the Anger patent, this patent had placed upon it the principal reliance of the defendants in the K. W. Ignition suit, with the result that the Court of Appeals said:

"The Anger device, covered by patent 1,031,612 (1913) is unlike the plaintiff's, in that it is primarily built into the car and is not constructed as a separate or a separable part. His entire spring arrangement must be built and put in place at the factory—the axle which is split or separated

into two parts being thus specifically made in order to admit of the use of his mechanism. No guide is employed to support the spring, nor does the construction admit of the use of a guide, or of a variation even approximating the plaintiff's structure. * * * The Haskins and Anger patents were cited against Thompson when his application was presented in the Patent Office, but were satisfactorily differentiated from his improvement."

I attach hereto a copy of the LeFevre patent 430,135 as plaintiff's Exhibit 16, Pernot patent 371,231 as plaintiff's Exhibit 17, and the British patent to Romabillo, 30,419, as plaintiff's Exhibit 18. The Court will find these pleaded as reported in the record, plaintiff's Exhibit 14.

As to the Storrie patent 1,279,045, that patent has nothing to do with the present one in suit, as it was much later and does not affect the validity of the Thompson patent. When suit was entered the docket entries show that after testimony was taken (showing that the Storrie patent was invalid) the case was dismissed by the Court at the plaintiff's cost.

[fol. 214] AFFIDAVIT OF O. P. EDWARDS

That he has read the affidavit of Storrie, Wilson and Dyer.

That the plaintiff has continuously manufactured the shock absorbers embodying the patent in suit and there has been no abandonment of such shock absorbers in accordance with the patent in suit. To the contrary, they have been continuously sold to the extent of two and one-half million dollars. For over a year these shock absorbers were manufactured and sold precisely like the drawings of the patent in suit, with a net profit $100,000. That in order to make the absorbers more economical for production manufacture, the present embodiment was adopted, such as shown in the attached exhibits, 19 and 20. A sample of the K. W. Ignition Company shock absorber, which was held to infringe the present patent in suit, is marked plaintiff's Exhibit 21, while a sample of the absorber as originally made during the first year—out of

which $100,000 profit was made, is marked plaintiff's Exhibit 22.

During the first year of this manufacture of shock absorbers, out of the number of sets between 13,000 and 14,000, there were only about $700.00 worth of repairs, so that the shock absorbers were substantially perfect (record, page 136, Remco vs. K. W. Ignition, plaintiff's Exhibit 14).

We have never changed our design, save for adapting it to more ready commercial manufacture in large quantities, and the statement that we copied the Storrie design or any other is false.

That as to the suit against our Company under the Storrie patent, after we had proved a prior use which was later than the patent in suit but earlier than the Storrie invention, this suit was dismissed for lack of prosecution at [fol. 215] the costs of the K. W. Ignition Company, plaintiff in that suit.

That the Storrie affidavit shows that one of the defendants in the K. W. Ignition suit, one Williams, the President of the K. W. Ignitoin Company and owner of practically all of its stock, has issued a license to the Apco Company under the Storrie patent, and is participating in this present infringement with the Apco Company, which he has been enjoined already from participating in by the Sixth Circuit Court.

Affidavit of Thomas A. Lind

Thomas A. Lind, being duly sworn, deposes and says that he resides at Dayton, Ohio; that on December 12th, 1923, he went to the salesroom of the Apco Manufacturing Company located at 224 Peachtree Street, Atlanta, Georgia; that said Apco Manufacturing Company maintains a stock of Apco shock absorbers at that place; that said Apco Manufacturing Company sells said shock absorbers at said place; that said place of business is the Atlanta Branch of the defendant herein, the Apco Manufacturing Company of Providence, Rhode Island; that said place of business in Atlanta is a regular and established place of business of the defendant herein; and that sales of said Apco shock

absorbers are consummated by defendant in Atlanta, Georgia.

Affiant further states that while at said salesroom in Atlanta, Georgia, he purchased from the salesman in charge one of said Apco shock absorbers referred to above, for which he paid cash in the amount of five dollars ($5.00), and that he received a cash receipt therefor, which is filed herewith, and marked Plaintiff's Exhibit No. 1. Affiant [fol. 216] further states said shock absorber was purchased on the 12th day of December, 1923, and was delivered to him the same day, the sale being consummated at said salesroom on said day.

Affiant further says that he marked said Apco shock absorber by scratching his initial L and the Roman numeral XX thereon; that said Apco shock absorber is filed herewith and marked Plaintiff's Exhibit 2 (Two).

Affiant also files herewith, and marks Plaintiff's Exhibit 8, an illustrated circular issued by defendant and distributed by defendant with its Apco shock absorbers involved in this suit.

Affidavit of T. C. Edwards

I reside in Leipsic, Ohio, and am Secretary of the Temco Electric Motor Co., the plaintiff herein.

I file herewith, and mark Plaintiff's Exhibit No. 7, a certified copy of the patent in suit to Ralph F. Thompson and William S. Thompson, No. 1,072,791 dated September 9th, 1913.

I file herewith, and mark Plaintiff's Exhibit No. 9, a certified copy of the assignment from Ralph P. Thompson and William S. Thompson to Oliver P. Edwards, dated December 7th, 1912, and the assignment dated March 18th, 1914, from Ralph P. Thompson, William S. Thompson and Oliver P. Edwards to The Temco Electric Motor Company, the plaintiff herein, said assignments showing that the plaintiff owns the patent in suit. I further state that the plaintiff now owns the entire right, title and interest in and to said letters patent No. 1,072,791 and in and to the invention covered thereby.

I file herewith, and mark Plaintiff's Exhibit No. 3, a photostatic copy of a circular issued by the Apco Manu-
[fol. 217] facturing Company, the defendant herein. Plaintiff's Exhibit No. 3 correctly illustrates the Apco shock absorbers made and sold by the defendant herein prior to the filing of the bill of complaint herein and correctly represents the Apco shock absorbers the defendant is now making and selling. Said Plaintiff's Exhibit No. 3 is a photostatic copy of Plaintiff's Exhibit No. 4 filed with the injunction motion in the suit of this plaintiff against The Pennsylvania Rubber & Supply Co., in the United States District Court for the Northern District of Ohio, Western Division, in which suit Judge Westenhaver held the patent in suit to be good and valid and to be infringed by the defendant and awarded an injunction permanently restraining said The Pennsylvania Rubber Supply Company from infringing the patent sued on herein. I further state that Judge Killits had previously awarded a preliminary injunction against The Pennsylvania Rubber & Supply Co., that Plaintiff's Exhibit No. 10 filed herewith is a certified copy of said permanent injunction awarded by Judge Westenhaver in the suit against the Pennsylvania Rubber & Supply Co., that the Apco Manufacturing referred to in Plaintiff's Exhibit No. 3 herein is the same Apco Manufacturing Co. referred to in Plaintiff's Exhibit No. 4 in said suit against the Pennsylvania Rubber & Supply Co. and is the defendant herein; that said Apco Manufacturing Company manufactured the shock absorbers sold by the Pennsylvania Rubber & Supply Co. and enjoined by Judges Westenhaver and Killits, as aforesaid, and also manufactured the Apco shock absorbers sold by the Belknap Hardware & Manufacturing Co., of Louisville, Kentucky against which Company Judge Moorman, in the United States District Court for the Western District of Kentucky, awarded a preliminary injunction restraining [fol. 218] said Belknap Hardware & Manufacturing Co. from infringing the patent sued on herein; that Plaintiff's Exhibit No. 11, filed herewith, is a certified copy of said preliminary injunction awarded by Judge Moorman; that the defendant herein also manufactured the Apco shock asborbers sold by the I. J. Cooper Rubber Company, of Columbus, Ohio against which Company Judge Sater, in

the United States District Court for the Southern District of Ohio, Eastern Division, awarded a prelminary injunction restraining said The I. J. Cooper Rubber Company from infringing the patent sued on herein; that Plaintiff's Exhibit 12, filed herewith, is a certified copy of said preliminary injunction awarded by Judge Sater; that the said shock absorbers sold by said The Pennsylvania Rubber & Supply Company, the said Belknap Hardware & Manufacturing Company and said The I. J. Cooper Rubber Company, and enjoined by Judges Westenhaver, Killits, Moorman and Sater, as aforesaid, and the shock absorbers heretofore made and sold, and now being made and sold, in this District and elsewhere, by the defendant herein, and known as Apco shock absorbers, are identical in construction, mode of operation and result; that all of said Apco shock absorbers were manufactured by the defendant herein; that all of the Apco shock absorbers referred to herein are correctly illustrated in Plaintiff's Exhibit No. 3 herein, which is a true and correct photostatic print of Plaintiff's Exhibit No. 4, issued by said the Apco Manufacturing Company, defendant herein, as a circular to illustrate its shock absorbers involved herein, which Plaintiff's Exhibit No. 4 was offered in evidence on the motion for the preliminary injunction in said suit against The Pennsylvania Rubber and Supply Company; and that Plaintiff's Exhibit No. 3 herein is a true and correct copy of Plaintiff's Exhibit No. 3 in said suits against [fol. 219] the Belknap Hardware & Manufacturing Co. and The I. J. Cooper Rubber Co., and referred to in the preliminary injunctions offered herein as Plaintiff's Exhibits Nos. 11 and 12.

I further state that the patent in suit was sustained and held infringed by Judge Killits in the suit of this plaintiff against Halladay and Brown, in the United States District Court for the Northern District of Ohio, Western Division; that it was sustained and held infringed by Judge Clarke in the suit of this plaintiff against The K. W. Ignition Co. and J. A. Williams, who was affirmed by the Court of Appeals for the Sixth Circuit (243 F. 588); that the patent in suit was sustained by Judge Westenhaver, sitting in the U. S. District Court for the Northern District of Ohio, Eastern Division, in the suit of this plaintiff against the

Forest City Electric Company, et al.; that in said Halladay suit the defendants settled for their past infringement by paying plaintiff the sum of $30,000 and agreed to desist from further infringement, and that in the suit of this plaintiff against the K. W. Ignition Co. the plaintiff recovered a judgment of $292,938.26; that after the Court of Appeals handed down its opinion of the accounting in the K. W. Ignition Co. suit, which resulted in the judgment of $292,938.26, the defendants filed a petition for a writ of certiorari, which the Supreme Court of the United States denied; and that the judgment awarded against the K. W. Ignition Co. has been paid.

I further state that the plaintiff began about October, 1912, to make and sell shock absorbers under the patent in suit; that these shock absorbers made in accordance with the patent in suit have been sold in this District and throughout the United States; that as soon as plaintiff put these shock absorbers upon the market there arose a great de-
[fol. 220] mand for them; that plaintiff has made and sold approximately 134,000 sets of shock absorbers in accordance with the patent in suit, for which it received about $2,500,000; and that these shock absorbers have been marked "Patented," with the date and year, since the issue of the patent in suit.

I also file herewith, and mark Plaintiff's Exhibit No. 4, a photostatic and true and correct copy of the "Defendant's Exhibit SS," a drawing of defendant's shock absorber held to be an infringement of plaintiff's patent sued on herein in the suit of this plaintiff against the K. W. Ignition Co., heretofore referred to. This drawing was offered in evidence by defendant as "Defendant's Exhibit SS" in the suit of this plaintiff the K. W. Ignition Co., heretofore referred to, and in which the Court of Appeals for the Sixth Circuit held that defendant's shock absorber infringed the patent in suit.

I further state that the shock absorbers which were held to infringe Plaintiff's patent sued on herein in the suits of this plaintiff against the K. W. Ignition Co. and J. A. Williams, against Halladay and Browne, against the Forest City Electric Co., et al., against the Pennsylvania Rubber & Supply Co., against The I. J. Cooper Rubber Co. and against the Belknap Hardware & Manufacturing Co. were

the same in construction, mode of operation and the result obtained as the defendant's shock absorber involved herein and as the shock absorber shown and described and claimed in the patent in suit.

I further state that the infringing Apco shock absorbers involved in said suits against the Pennsylvania Rubber & Supply Co., against the I. J. Cooper Rubber Co. and against the Belknap Hardware and Manufacturing Co. were manufactured by the defendant herein, and that said shock absorbers of said Companies and of this defendant are identi- [fol. 221] cal in construction, mode of operation and result; and that said shock absorbers of said Companies and of this defendant are correctly illustrated in Plaintiff's Exhibit No. 3 and in the photostatic production of the Apco Manufacturing Company illustrated circular forming a part of Plaintiff's Exhibit No. 5.

Second Affidavit of Thomas F. Wilson

I have have already given an affidavit in this cause, being President and Treasurer of the Apco Manufacturing Company.

My attenion has been called to the statement in the affidavit of O. P. Edwards, executed on the 28th day of March, 1924, to the effect that the K. W. Ignition Company or one Williams issued a license to the Apco Manufacturing Company. This statement is not the truth and contains no element of truth. The K. W. Ignition Company or the said Williams has never issued a license to the Apco Manufacturing Company. The Apco Manufacturing Company does not own any stock in, nor is it otherwise directly or indirectly interested in the K. W. Ignition Company, or connected with the said J. A. Williams; nor are any of their products manufactured and sold by the said Williams or the K. W. Ignition Company. The Apco Manufacturing Company is a competitor of the K. W. Ignition Company and the said J. A. Williams. The Apco Manufacturing Company has continuously paid William Storrie a royalty for manufacturing shock absorbers under his said Storrie Patent. I myself am in no way connected with or directly or

indirectly interested in the said K. W. Ignition Company [fol. 222] or the said Williams, nor in any of the products manufactured by the said K. W. Ignition Company or the said Williams. The said K. W. Ignition Company is not participating in any alleged infringement, directly or indirectly, with the Apco Manufacturing Company. I have no knowledge whatever of the fact that the said Williams or the K. W. Ignition Company have been enjoined in any infringement suits, other than I have been recently advised by my counsel. The Apco shock absorber manufactured by the defendant herein is in no wise like the shock absorber manufactured by the K. W. Ignition Company which K. W. Ignition Company absorber I am informed ha-been held to be an infringement of the Thompson patent in suit.

Deposition of Jeremiah L. Hatch

Jeremiah L. Hatch, called on behalf of defendant, testified Sept. 15, 1924, that he is aged 48 years and resides at Buffalo and is a garage and repair man having been in that business for 20 years. That he is not an agent for Ford cars but has handled and repaired Ford cars for 16 years and is quite thoroughly acquainted with the construction thereof, especially such parts as the springs and axles and the way the springs are connected to the axle and the way the fenders and fender ends or lamp brackets are mounted on the cars; that there has been only one change in the T model Ford car since it has been on the market and that is the lowering of the radius rods, the Ford Company placing the radius rod underneath the axle whereas before it was above the axle.

That he is acquainted with shock absorbers for Ford cars having had experience with probably 6 or 7 different makes of shock absorbers including Hassler, Halladay, [fol. 223] Dreanaught, K-W, Temco; that there was another kind with two long arms that he thought was handled by the U. S. Rubber Company at that time although he did not handle any in the last 7 or 8 years but the U. S. Rubber Company did; that he had forgotten what they were; that there was a T and E absorber that was called by those initials or something like that.

The witness was then shown several shock absorbers lying on the table before him and stated that he put those shock absorbers, those kind of shock absorbers, on, several different sets of them, but couldn't say how many; that they came off Harry Florian's car and were brought to the place of his deposition by him.

The shock absorbers were marked for identification as Defendant's Exhibits 35, 36, 37, and 38.

The shock absorbers were taken off Mr. Florian's car by him and are exactly in the condition they were in when taken off his car, to the best of his knowledge; that he does not imagine anyone touched them; that he took them off yesterday afternoon and they were in his garage overnight.

That these shock absorbers are not the only form or type of Temco shock absorbers he ever saw or had experience with; that in the new type what the Temco Company called the new improvement there was a different cap, (over here) the others did not have it; that it did not have the nut on top of the absorber but had a cap over the top of the spring.

The witness then testified further as follows:

Q. Did that cap fasten to the absorbers?

A. Yes, I think with two screws in the top here. It was so long ago that I handled that, it was eight or ten years, that is to the best of my memory.

[fol. 224] Q. Do you remember a Temco absorber in which the Spring connected to the side of the absorbers?

A. Ford spring connected on the side?

Q. Yes.

A. Yes.

Q. What was your experience with those absorbers?

A. It pulled over to one side. These is a good illustration right here of how it was pulled over to one side (pointing to defendant's exhibit 35).

Q. I am now talking about the first Temco absorbers in which the Ford spring was connected to the side. What was your experience with them?

A. Had a tendency to pull over to one side and caught on the fender bracket and jammed the top of the housing over the spring.

By Mr. Toulmin: This line of testimony is objected to on the ground that the operativeness of the patented shock absorber now in question is no longer open to discussion as this issue has been closed. It is understood that this objection will apply to all similar testimony along this line.

Mr. Keller: I believe that heretofore I have made myself plain on the record. This defendant is not bound by the record in which the facts of the operativeness of the plaintiff's device were withheld from the record, and it is open to this defendant to prove all actual facts connected with the inoperativeness of the plaintiff's device. Further comment is reserved until the trial of the case.

Q. I hand you a copy of a patent and ask you whether that patent shows the original Temco absorber as you first saw it.

[fol. 225] A. Well, I don't know. This is supposed to be it with the shell on it. (Pointing to Figure 2 of the patent.) About like this patent.

Q. Will you please state what your experience has been with the shock absorber as shown in Fig. 3 of the patent I hand you?

A. The adjustment on the spring was underneath the cap and they used to break, that spring either used to break or give way enough to let the spring down onto the axle, and to overcome that we used to take the cap off and the nut off the top and put washers on it to raise it up off the axle.

Q. Did the fender rods or any parts of the car strike this absorber, as shown in Fig. 3 of this patent?

A. I think I answered that question further up there. That the nut on this fender iron here came down and jammed the housing over that spring.

Q. State whether or not that had effect on the pin which is marked D in Fig. 3 of the drawing?

A. Well, now, I don't know. That was a thin or sheet iron covering over there and eventually it would if you left the shock absorber on, and by banging it on the top there would be a tendency to bend that arm pin over.

Q. Did you ever have occasion to repair this type or fix the arm in any way, the outer pin D in any way?

A. I had several occasions where I had to repair the springs in this.

Q. What about the pin D?

A. We straightened that pin.

Q. How?

A. By bending it cold. We can bend that to straighten that cold, bend it back again.

Q. Do you know how long the absorbers introduced here as defendant's exhibits 25 to 28 inclusive, were on the car of Mr. Florian?

[fol. 226] A. I couldn't tell that. Those front ones he changed himself, the rear ones have been on there over four years anyway.

Q. Do you know whether or not Mr. Florian ever had any dealings with the Temco Company in connection with these absorbers?

A. Not until he got these two. This was a transaction of his own these two front shock absorbers.

Q. With the Temco Company?

A. Yes, he sent his old ones back to the factory and they sent him these two.

By Mr. Toulmin: Objected to, hearsay.

By Mr. Keller: I now call upon the plaintiff and plaintiff's counsel to produce during the taking of plaintiff's rebuttal depositions all correspondence that passed between Mr. Florian and the plaintiff Company relating to Temco shock absorbers of any style or type.

By Mr. Toulmin: We regard such material as entirely irrelevant but shall, of course, produce any correspondence of this character in order that the Court may see the nature of it.

Q. Do you know of your own knowledge whether or not Mr. Florian changed the springs in his Temco shock absorbers?

A. No, I couldn't tell you that. I only know that these arms were worn so that they rattled. He brought them in for us to try to tighten them up but it was almost impossible to do that unless we sent them to the factory for all those parts. Some time later he said they had gotten so [fol. 227] bad he would have to do something with them and I advised him to take them off and send them back himself.

The witness was pointing to the radius links on the front absorber, Exhibit 37.

The witness said he would be unable to state what the condition would be referring to Exhibit 35 unless he looked at the car; that the shock absorber came off a car with a big box on the rear so that he does not know what the condition would be "on that there." That there are two things that could cause the wear of the spring of Exhibit 35, that if there is a bushing in the absorber and if the bushing is worn out that would do it and if his box is built in such a way that the box would come down and knock those absorbers that would be another condition that you would have to look into.

That he didn't think the physical exhibits 35 to 38 are more operative or successful than the type of absorber shown in the figure 3 of the drawing of the patent in suit (over objection of counsel that the question was leading and because the witness has not qualified as an expert to construct the patented construction with respect to the shock absorbers before the witness); pointing to figure 3 of the patent he said "as far as those shock absorbers are concerned the shock absorber part of it is no better, one is no better than the other, because those springs in there will wear and break just the same as the one on the side. The only thing they have overcome here is by putting on a cast iron cap to help keep the spring, I should think, straight in the housing. They haven't overcome anything between those and the old type only that cast iron cap will stand more banging on the top but will not keep the spring in an upright position any more." That he does not know [fol. 228] how many different sets of Temco absorbers Mr. Florian had on his car.

Cross-examination:

The witness said that he did not know what Mr. Florian's Ford car was originally; that Florian had taken the back off, that he had two cars, one he thinks was a touring car, both of the cars had boxes on the rear for peddling cigars, that the shock absorbers introduced in evidence were taken from a touring car which had the rear taken off and the box put on and used for carrying merchandise; that the body

was rebuilt for the purpose of delivering cigars; that he is unable to say whether or not he sold him the absorbers that were put in evidence but that he had sold him some Temcos and undoubtedly sold him the first set of Temcos he had, that he doesn't know whether he put more than one set of Temcos on his car, that he does not know how far the absorbers (which plaintiff's counsel called "very dirty") have run on Mr. Florian's car, that his car was generally used every day in the course of his business, that Mr. Florian brought his car in to be repaired for the past 12 years and that he brought this particular car into him for the last four years, that it was Harry's car, that the car had had quite considerable repair from time to time in the last four years, but not more than usual; that he would not say whether the shock absorbers had run 15 or 20 thousand miles; that he wouldn't guess within 3 thousand miles. That he put the original set on his car and that the absorbers of the exhibits were taken off the car to be brought into the place of the taking of the deposition.

Counsel for defendant stated that he did not attack the question of operativeness of the second and third types of plaintiff's absorbers.

[fol. 229] Redirect examination:

The box on Mr. Florian's car did not extend over the front absorbers and had nothing whatever to do with those absorbers; that the indentations or depressions on the shell of defendant's exhibit 37 were caused from the nut on the front fender iron of the car, the springs allowing the body to come down so that the nut on the fender iron caused that indentation on exhibit 37; that if you take the cap off undoubtedly you will find the same condition existing in that as you did in the shock absorbers before, of pulling to one side and wearing the casing on the inside such as shown in exhibit 35.

Recross-examination:

That the absorbers of exhibits 37 and 38 were on Mr. Florian's car he should say three months; that he does not know that to be a fact of his own knowledge.

That he does not sell Apco absorbers and does not install them and won't install any absorbers unless the owner of the car specifies what kind; that he believes in shock absorbers for Fords and puts on what the owner specifies; that he was not subpœned to testify but came voluntarily.

Redirect examination:

That Mr. Keller asked him to testify; that he did not tell him what to say; that Mr. Keller in general asked him if he had much experience putting on shock absorbers and what his general idea was of this "Temco" shock absorber and how it acted and worked on the automobile; that Mr. Keller asked him to take these shock absorbers off Mr. Florian's car and to put on a set of Apco absorbers; that he had a set of Apco absorbers sent to him for that purpose and replaced them on Mr. Florian's car.

[fo. 230] Defendant's counsel under the stipulation in the case made at Providence requested plaintiff to produce for cross-examination Mr. T. C. Edwards and Mr. O. P. Edwards.

DEPOSITION OF HARRY M. FLORIAN

HARRY M. FLORIAN testified Sept. 15, 1924, on behalf of the defendant; that his age is 43 years and that he is engaged in the business of jobbing cigars.

The witness identified exhibits 35, 36, 37 and 38 as being the shock absorbers on his car and said that they were taken off Saturday by Mr. Jerry Hatch, replacing them with Apco absorbers; that he does not recall from whom he bought the Temco absorbers on his car originally but that they were put on by Jerry Hatch; that the exhibits were not the only absorbers he had on his car since 1915, that he had had 3 sets on the car from that time, that the absorbers as originally put on his car did not have the nut on top of the cap, that the caps on top were plain, that he does not recall that the caps moved down or were affixed to the absorbers, that he doesn't know how they did work that it was a long time back; that the first set was bought in 1915 in the fall of the year, August, or September, may be October, that the absorbers were not bought direct from

the Temco Company; that the first set was bought either through Strauss, Ditcher or Jerry Hatch; that he wrote the Temco people for replacements for bushings and they sent him a diagram for parts and a proposition to replace them for $6.25, something like that which he took up that they sent him new shock absorbers, that he thinks the first set was brand new, that he later put the same proposition to them again, and the next time got another set, probably [fol. 231] two years afterwards but he doesn't know for sure; that on memory he changed them twice, but could not say for sure; that the second set were the same as exhibits 35 to 38, that they had the grease cup on instead of oil; that those of the exhibits have oil, maybe it is grease, that he doesn't know; that the later type had the grease cup on instead of oil, reference to grease and oil cup being to the cup at the base of the absorber where the radius link is fastened and not to any grease cup or cap at the top of the absorber.

That the repairs had over the period of two years were on account of wear; also that he had trouble with the springs in it, that the springs broke, he does not recall how many times and that he would replace them with the old shock absorbers; that he would change off and on; that they would sag and break; that he thinks the spring in exhibit 37 is broken.

That the car on which the exhibits 35 to 38 inclusive were used was a Ford touring car for delivery purposes, with a wooden box on the back, that the body could in no way come in contact with the absorber on the car, that the box on the rear of the car does not come in contact with the absorbers on the rear of the car at all, that there are no other parts on that wooden body that might come in contact with the absorber; that the condition of the absorbers of exhibits 35 and 36 is result of wear of the absorbers in use.

The witness further testified as follows:

Q. Did you ever have any trouble with the absorbers in other respects than that of the spring breaking.

A. Well, originally with the cap, the old style cap, the front fender rods used to strike them. The other ones used to be straight ones and this one is offset.

[fol. 232] Q. Referring again to the first absorbers which you put on your car, the first Temco absorbers, is it your recollection that they had a telescoping cap or any kind at all, or were they just stationary caps?

A. I don't recall, I know they were a smooth cap but I don't remember how they were fastened.

Q. Did they have any nut on the top, like defendant's exhibit 37?

A. Not that I recall. I don't know what held them down. They were a smooth cap on the top.

Q. I show you figure 4 of plaintiff's exhibit 6 in this case and ask you whether or not they looked like that view?

A. I think so, I don't know. I can't recall. I remember the top was smooth but that is all I can recall. I don't know what was on the inside.

Q. After you changed them the second time did you have any other changes made on the Temco absorbers?

A. No, I took an old set we had there and put them on another car and those parts I have been using for replacements on these.

Q. So that these sets of absorbers, defendant's exhibits 35 to 38 inclusive, you have repaired yourself from time to time from the Temco absorbers you have in your possession?

A. Yes.

Q. From the previous two sets?

A. The first time I sent the old set back and they replaced them with a new. The second time they sent me a new set without the replacement, as I recall it.

Q. What parts of these absorbers, exhibit 35 to 38 inclusive, did you replace?

A. Springs.

Q. Just the springs?

[fol. 233] A. Yes. Maybe moved the caps around after they were dented in and put one of the other ones on. They are of the latest. (Pointing to exhibits 37 and 38) 38 is a later one and the cap on 37 is an older one.

Q. I notice the dent in the top of the cap on exhibit 37. Can you tell me how that got in the cap?

A. Only from the fender rod, is the only way I can imagine.

Q. So that in these four exhibits, 35 to 38 inclusive, the rear absorbers, or defendant's exhibits 35 to 36 are older than the exhibits 37 and 38, is that it?

A. The two front ones are the older, I believe. They were cracked off, they broke off in the pin and replaced by the others.

Q. You mean the pin that goes through the axle.

A. Yes.

Q. Were those broken absorbers sent back?

A. No, I replaced them. Hatch took the car in the garage and I gave him these.

Q. Where did you get those absorbers to take the place of those that broke off at the pin?

A. These were off the car that was not in use.

Q. So that you have them on another car?

A. They were on the other car, what we call a spare car.

Q. How long were they on the car?

A. I don't recall. Quite a while. They were on a car that was only used occasionally for emergencies.

Q. That is the front absorbers?

A. Yes.

Cross-examination:

The witness said it was hard to say how long exhibits 35 and 36 were on his car, "changing them around like that," being on the last time for around three years; that exhibits [fol. 234] 35 and 36 were on about three years and exhibits 37 and 38 were on since last November when he broke the others; that exhibits 37 and 38 had been used prior to last November on a car but had no use to speak of; that exhibits 35 to 38 were taken off the car to be brought in for his testimony; that the car was in daily use; that the absorbers 35 and 36 were run 40 to 50 miles a day on the average of four days a week; that he does *not* know how far the two absorbers have run; that they have three cars; that they have three sets from the Temco people and he doesn't know whether he had another set that he picked up from Jerry Hatch or not, but it seems that he did have an old set. That he did not use these Temco absorbers on these cars since 1915 but that originally they were only on one car and

they didn't take the old absorbers for replacement and I took them and put them on a spare car, that he has been using the Temco absorbers since 1915 on one car practically all the time until they were taken off on Saturday; that the other car was equipped with Hassler shock absorbers; that he does not know how many miles the various absorbers he has had since 1915 have run, that is Temco absorbers and couldn't begin to tell, that he is using the Apco absorber on his car now, that he had never had them before and no experience with them, that he had just got the car from the garage this morning and has them on now; that he has had accidents with his car, having been banged up a couple of times, that that is all the accidents he has had with his own car "if you don't count hitting kids and the like. I have hit a couple of children but that has nothing to do with shock absorbers."

That in his first accident with his car he hit the hub cap of another car and bent the V shaped radius rod which runs [fol. 235] from the crank case to the front axle, that the next accident was the running of his car into a sand bank which caught the front wheel, which caused the left-hand shock absorber to be sheared off, letting the wheel come back under the car; that the repairs of one of the front shock absorbers were due to this accident which let the car go into the ditch; that it is all the accidents he can recall except that he got hit in the rear two weeks ago Friday, damaging the box on the car in which he carries his cigers for distribution; that the cars have practically always carried this box, that he used the car for pleasure and business both; that the box came off the — the touring body went on, that the Ford car from which the shock absorbers were taken is a 1914 or 1915 car; that he bought it in August, 1915; that his main trouble was with the radius links on these shock absorbers, that the bearing and the shackle wear always made it loose, that the real trouble was the springs, but that this here was an annoyance, that they were never tight, that they rattled and that you could see the wear on them pointing to exhibit 35.

Redirect examination:

That he replaced the shock absorber which snapped off in the accident and was afraid of the other snapping off because it looked as though it had crysta lized, that the absorber is not among the absorbers as an exhibit, that it was thrown out, that the wear on the cup or body of the absorbers of the exhibits 35 and 36 is caused by the pin in there throwing the springs off center. That the wear was caused by the upper cap, the cap being thrown up against the side of the absorber, by the spring being thrown to one side.

That he wrote perhaps two or three letters to the Temco Motor Company since probably 1917, that he wrote them for [fol. 236] parts and they came back with a proposition to replace which he took up; that the second set he got from the Temco Company were a reconditioned set, that they weren't brand new in his judgment, that they sent a set that was reconditioned for the price of $6.25 to $6.50 he thought, and they didn't get the other set back; that the first time they took the old ones. When asked whether these reconditioned absorbers were among exhibits 35 to 38 inclusive he said "quite likely they are because they were the last ones I got from them."

Defendant offered in evidence defendant's exhibits 35, 36, 37 and 38, and plaintiff's counsel objected to the offer for the reasons noted in the deposition.

DEPOSITION OF OLIVER P. EDWARDS

OLIVER P. EDWARDS called as a witness at the request of defendant's counsel for cross-examination on his affidavit in this case, before being cross-examined was examined by plaintiff's counsel as follows:

That he had an investigation of the Temco Electric Company made to ascertain the amount of repairs in terms of money which had been supplied to the customers during the time the plaintiff has been in business. The witness produced a paper which he examined and testified that in 1916 the repairs amounted to $2,055; in 1917, $1,548; in 1918,

$835; in 1919, $816; in 1920, $894; in 1921, $734; in 1922, $501, and in 1923, $669; that prior to 1916 the amount of repairs were something like $700; that during the time covered by all the repair charges the gross business in shock absorbers sold to the public amounted to approximately two to two and a quarter million dollars; that the number [fol. 237] of sets sold by the plaintiff and the K-W Company together since the beginning of the shock absorber business down to date is approximately one hundred and thirty-four thousand (134,000) sets. Plaintiff put in evidence exhibit No. 19 comprising correspondence between Mr. Florian and the Plaintiff Company.

The letters were identified by the witness and the witness said that they sold him shock absorbers from the beginning of business up to the period of 1923, that is within that period; that they traded in some of his own shock absorbers for new ones, that he proposed to exchange the old for new ones at one time which they did; that it is customary in the trade to trade old equipment for new.

The plaintiff offered in evidence exhibit No. 20 comprising letters kept in the regular course of business of the plaintiff company and defendant's counsel objected on the ground that they were irrelevant and immaterial in view of the fact that they were meaningless without the testimony of the authors and the circumstances connected with their manufacture.

The witness stated that he absolutely knew of his own knowledge that the absorbers manufactured by the plaintiff had been marked with the date of the issue of the patent in suit.

Cross-examination:

That he has been actively connected with the Temco Company since the early days of manufacture of shock absorbers that his brother came into the Temco Company a short time after it started; that he could not say right now just when [fol. 238] but that it — he has been with the Company for a long while; that he and his brother are stockholders and when asked whether it was a fact that he and his brother sort of owned the Temco and were the majority stockhold-

ers under objection of counsel they refused to answer the question, his counsel stating that he was the stockholder and the President but that the size of his interest and that of others was of no concern to the Defendant.

That the letters which were introduced in evi lence as exhibit No. 20 were in the majority from users that he doesn't recall that any of the letters of said exhibit were from an agent but that there might be.

That the Temco Company sold the K-W Ignition Company some 13,000 sets of shock absorbers during the selling agency arrangement which he thought was during 1914, and that the amount of replacements sent the K-W Company during the period was $700; that during the years 1914 and 1915 the repairs amounted to $700; that he does not know how many sets of shock absorbers the Temco Company made during the year 1915 that he does not remember how many they made in 1916; that he does not remember the number made each particular year. When asked why he included the business done by the K-W Ignition Company in the approximate estimate of two or two and a quarter million dollars he said it was because they were doing business with the K-W at that time under contract and were making their shock absorbers; that it was the total business done on shock absorbers including both Temco and K-W Companies and including the shock absorbers which were made by the K-W Company and held to be an infringement; that the only ones Temco manufactured for the K-W Company up until the time the contract was terminated was 13 to 14 thousand sets, that the 134 thousand sets includes all the shock absorbers made by [fol. 239] the Temco Company and all the shock absorbers made by the K-W Ignition Company including all that the K-W Company made during the infringing period; that the K-W Company sold approximately 66,000 sets in all and the Temco Company 68,000 sets; that the 13,000 sets that were manufactured by the Temco Company and sold by the K-W Company are included in the 68,000 sets, so that the Temco Company has manufactured in all up to and including the year 1923 approximately 54,000 sets.

That the nature of the repairs of 1916, 1917, and 1918 he could not state exactly except to say that they included bush

ings and broken springs. The witness then further testified as follows:

X Q. What type of absorber was the Temco manufacturing during the year 1915, the one with a fixed shell with a spring inside, that is, which the shell didn't move up and down, the absorber having a fixed cap?

A. I do not remember just what year there was any change made, except I know that the only shock absorber made has been a shock absorber this is using the basic patents they have always had on the shock absorbers.

X Q. That is not what I asked you. You have made several different forms of shock absorbers, and whether in your opinion they are under the patent, that is a matter for the Court to say, but I am asking you what type of absorber, during the year 1915 you made. Was it one with a telescoping shell or with a fixed shell.

A. Well, I do not remember.

X Q. You were actively concerned in the manufacture of these shock absorbers, weren't you?

A. Yes, sir.

X Q. Quite actively concerned?

A. I was actively concerned, not as working in the manufacturing end of the business.

[fol. 240] X Q. Weren't you concerned in keeping the records of the Temco Company, yourself personally?

A. At the start I did, but I didn't all the time, no.

X Q. Over what period of time did you keep the records?

A. I don't remember, we had a bookkeeper.

X Q. Did you keep any in 1915?

X Q. Well I don't remember when we got a bookkeeper. We got a bookkeeper, to do that work and I didn't do it.

X Q. Do you know what type you were making during the year 1916?

A. I don't remember the exact dates when any of these changes were made, no.

X Q. You do not?

A. No.

X Q. What do you mean, "any of these changes"?

A. Which you mention, of the closed barrel.

X Q. Well, now, as a matter of fact, Mr. Edwards, the absorber with the closed barrel, which I presume you mean,

is the fixed shell, the one where the shell didn't move at all, was manufactured by you before you put out what is known as your telescoping type, isn't that true?

A. I don't remember that. I didn't look after the sales of the business at that time nor did I have the work of producing and manufacturing end of the business, I simply had the general overseeing of the business and didn't watch those details.

X Q. Who did have the handling of those details?

A. Mr. Thompson did it at first.

X Q. How long was Mr. Thompson with the Temco Company?

A. I don't recall just when he did leave.

X Q. Well, did he leave in 1916 or 1917?

[fol. 241] A. I think about 1917, some place close there.

X Q. Did you have anything to do with the policy of The Temco Company at the time about making changes in the absorbers?

A. Oh, just discussed it of course as general manager of the business.

X Q. You were the general manager at that time?

A. Yes, sir.

X Q. Over the years 1915, 1916 and 1917?

A. Yes, sir.

X Q. Are you the general manager now?

A. Yes, sir.

X Q. What position does your brother hold?

A. My brother is Secretary.

X Q. Was he concerned in the active management of the company over those years?

A. I don't remember when he came with us, but he has been with the company for a number of years.

X Q. Is he with the company now?

A. Yes, sir.

X Q. Well, as general manager of the company, Mr. Edwards, certainly you can tell us a little more than you have already done, as to whether or not there is any control by you as to the manufacturing end of this shock absorber business, as to the making of these changes.

A. I haven't control over the business, over the company.

X Q. Well, were the changes discussed in your presence, at all?

A. At times, yes. I was away from the business at different times on ac-ount of my health for several years. I was there at discussions different times on the shock absorber business.

X Q. You probably recall some advertising of your shock absorber back in 1915 and 1916, with the telescoping shell? [fol. 242] A. Probably so.

X Q. And that is the type that you have continued to manufacture from those years to date?

A. We eliminated the telescoping cap some time ago, just a few years back.

X Q. Eliminated it?

A. Yes.

X Q. Do you mean the fixed barrel was made after the telescoping cap?

A. No, we used the open type, what we call the open type shock absorber the last few years, without the telescoping dust cap.

X Q. They haven't any dust cap on?

A. Not now.

X Q. Did you advertise that shock absorber anywhere?

A. The one we are making now?

X Q. The one you are talking about, without the dust cap?

A. Yes, we have advertised it.

X Q. Extensively?

A. Oh, fair, I suppose; some.

X Q. When did you start advertising it?

A. I don't remember that.

X Q. That absorber doesn't appear in the papers that were submitted by the Temco, or the plaintiff in this case, on the motion for preliminary injunction, does it?

A. I don't remember.

X Q. Have you got a picture of that shock absorber with you?

A. No, I have not.

X Q. This other type of Temco absorber that you have just disclosed to me, when did you first put that type on the market?

[fol. 243] A. It is not another type of shock absorber. We simply eliminated the dust cap, and all the other parts are the same. All the working parts are just the same.

X Q. In other words, it was a telescoping type, with just the dust cap left off?

A. And the barrel that contained the spring was cut down, all to reduce the expense of manufacture and give it the open type effect.

X Q. When did you say you put that out?

A. I don't remember what year that was changed, the exact time.

X Q. Was it last year?

A. I don't remember.

X Q. Was it the year before?

A. I could not say just what time it was. I don't remember now.

X Q. And you are the general manager of the company?

A. I am.

X Q. And you don't know when that change went into effect?

A. I don't remember now.

X Q. Was it just before this year?

A. I don't remember when the change was made. I don't remember just the exact date.

X Q. Well, now, you can give us a little more definite answer than that, Mr. Edwards, surely. Was it this year or last year? Were you making them last year?

A. Shock absorbers?

X Q. No, this type we are talking about now?

A. I don't know just when the change was made. It has been within the last few years, it seems to me, but just when I do not know.

X Q. Were you making them last year?

A. I don't remember.

[fol. 244] X Q. Were you making them the year before?

A. We were making shock absorbers but I don't remember when that change was made.

X Q. I am speaking about this new type you have just disclosed to me. Were you making them year before last?

A. We didn't change the type.

X Q. I mean, you have talked about one without any cap or housing. Were you making that last year?

A. I don't remember when the change was made.

X Q. Wasn't it discussed with you?

A. It was discussed before it was made, but when it was put into effect, I do not remember. I have been away from the business some the last number of years and it might have been put into effect while I was gone, I don't remember.

X Q. What was the reason for this change?

A. To reduce the manufacturing cost some and it gave what we called an open type or open appearance shock absorber.

X Q. You just made the change for the appearance?

A. For both.

X Q. Did you change the manufacture or shape of the stanchion or anything?

A. No, sir.

X Q. So that the stanchion was the same as the stanchion previously used in the fixed cap type?

A. The stanchions have been the same.

X Q. You testified in your suit against the Halladay Company, did you not? The suit of the Temco Company vs. the Halliday Company on this Thompson patent?

A. I think so.

[fol. 245] X Q. I have just received from Messrs. Parker and Carter, Chicago, a copy of the record in that case. You are Mr. O. P. Edwards, aren't you?

A. Yes, sir.

X Q. You testified in that case on April 10, 1916, before Judge Killits, isn't that so?

A. I don't remember the date.

X Q. Well, it was in the spring of 1916, isn't that so?

A. I wouldn't remember that without refreshing my memory on dates.

X Q. Well, the record says April 10, 1916, before Judge Killits, on page 12, you were asked this question:

"Q. Approximately how many Temco shock absorbers have you manufactured?"

and you answered:

"A. Sixty thousand sets."

Then Mr. Toulmin asked you this question:

"Q. And about what money would that represent?"

and you said:

"A. Approximately $500,000."

You testified that way, did you not, in the Halliday case?

By Mr. Toulmin: Counsel is requested to show the witness the entire testimony. No one has seen the record of his testimony.

(Thereupon the record was handed to witness.)

A. What is the question?

[fol. 246] (Last question read by the Stenographer.)

A. I did.

By Mr. Keller:

X Q. So that if we subtract this 60,000 sets from this 68,000 sets that you manufactured, that leaves 8,000 sets, doesn't it?

A. I don't quite understand.

X Q. You testified that you manufactured 60,000 sets, and you previously testified today that altogether you manufactured 68,000 sets. That would be a difference of 8,000 sets; isn't that so?

A. Well, that 60,000 sets might have been included in those we manufactured for ourselves as well as the K. W., all told.

X Q. That may be true, but all told it amounts to 68,000 sets that you manufactured for yourself and for the K. W., isn't that so? At least you have testified to that effect.

A. Yes, that would be about right.

X Q. So that if we would subtract this 60,000 sets, which you testified to in the Halliday case, that is a difference of 8,000 sets, isn't that so?

A. Yes.

X Q. So that from 1916 down to and including the year 1923, you have manufactured 8,000 sets, is that so?

A. (Looks.) That is the question I answered in there, that we manufactured 60,000 sets up to 1916?

X Q. Yes.

A. I presume that would be the balance although I haven't stopped to figure it out.

X Q. Well, that approximately is a balance of 8,000 sets.
[fol. 247] A. Probably.

X Q. Now, when you- counsel, Mr. Toulmin, was examining Mr. Storrie at Providence, he called his attention to the patent in suit, which I will hand you, referring you particularly to figure 3 of the Thompson patent, and ask Mr. Storrie this question:

"X Q. 281. Referring to the Thompson patent, is it not true that there is a clearance between the disc F and the casing C"?

And Mr. Storrie answered:

"A. It is true as showing by this drawing"?

Is it your understanding, Mr. Edwards, that the shock absorber manufactured by you had a space between that washer and the casing?

A. I could not answer that because I am not of a mechanical turn of mind and I am not an inventor and I could not give individual details of the inventions or the mechanical construction.

X Q. Did you ever examine one of your absorbers, old type?

A. I have examined it just casually.

X Q. Did you ever see a space between the washer and the casing?

A. I didn't examine it with that particular attention; anything in that regard.

That the repairs of $700 of 1914 and 1915 included he thought, the repairs of the K-W Company sent in direct to the Temco Company. When asked when the Temco Company last advertised Temco shock absorbers in the trade papers he said that he did not recall; that he could not remember when. When asked whether they did any advertising in the last few years he said that he did not recall. He then asked whether trade papers and trade advertising was meant in the question and when advised that it meant any sort of trade paper publication said:

[fol. 248] "A. Oh, we have advertised the shock absorbers through circularization and have always continued that method, but just when we stopped what we call our

national publicity advertising, I do not recall when that stopped."

Mr. Werner is not an officer of the Temco Company now, but he is in the drill end of the business and works for the Temco Company and is not a stockholder, that my brother and I have charge of the business now, the manufacturing.

The witness then was asked the following questions and answered as follows:

X Q. Are you still manufacturing the Temco shock absorbers with the telescoping cap at all?

A. No, we are manufacturing the open type now, unless we have a call for that particular type.

X Q. Are you manufacturing that under the name of Temco Manufacturing Company?

A. Yes, sir.

X Q. Are you part of the firm of Edwards Brothers Company, Leipsic, Ohio?

A. I am.

X Q. You are manufacturing a shock absorber?

A. We are developing a shock absorber.

X Q. Where are you making that shock absorber?

A. We are developing the shock absorber there at home.

X Q. At the Temco plant?

A. In front of the Temco plant, yes.

X Q. Is the office there in the Temco Company?

A. No, we have our office up in our own rooms.

[fol 249] X Q. What do you mean?

A. The Edwards Brothers Company.

X Q. Is that separate from the Temco Company?

A. Yes, sir.

X Q. That is, the office?

A. Yes.

X Q. Is it near the Temco Company?

A. Well, we are up town.

X Q. Where is the office of the Temco Company?

A. We are handling the business of the Temco.

X Q. In the same office?

A. Yes, sir.

X Q. How long have you been developing this Edwards absorber?

A. Oh, we have been working on it most actively just recently, within the last year.

X Q. Have you advertised it in trade papers?

A. No.

X Q. Can you describe it to me generally?

A. Oh, it is on the same principal as the Temco shock absorber.

X Q. Which one? One of the recent ones?

A. The principle is the same as all the Temcos. It has an outer spring and a spring that works inside. It *i*' a little heavier than that other Temco.

X Q. Well, it has a conical spring, has it?

A. Yes.

X Q. I hand you a paper which I will mark "Defendant's Exhibit No. 39" and ask you whether the absorber shown thereon and called the New Edwards Shock absorber is the shock absorber in question?

A. Yes.

X Q. This paper which I hand you is marked Ford Dealers News, dated July 19, 1924, and describes the shock [fol. 250] absorber. Will you please state whether or not you supplied the paper in question with the description as it appears thereon in connection with your shock absorber?

A. I could not say who wrote up the description of the shock absorber. I didn't write it myself.

X Q. Well, did you supply them with the material to write it?

A. I could not say whether we did it or whether our advertisers did it.

X Q. Did you supply them with the cut?

A. I do not know who supplied them with the cut. I had nothing to do with it, with the description, of the write up.

X Q. You and your brother are developing this shock absorber, isn't that so?

A. We are interested in the company that is developing it.

X Q. Are you the inventor of it, that is, did you design it, you and your brother?

A. With the help of some outsiders, yes.

X Q. What do you mean by with the help of outsiders?

A. We had the help of an engineer that is working with us, helping us.

An engineer helped us work out the mechanical end,—not the mechanical, but I mean the sizes of the parts, testing the springs; he is still with us. When asked whether he understood the Edwards shock absorber and how it worked he replied "Oh, I wouldn't practically say" and when asked if he understood it generally said "Well, yes, I think I do." He was handed defendant's Exhibit 39 and indicated the parts which defendant's counsel had marked with reference numerals as being as follows:

[fol. 251] 2 is the leaf spring of the Ford car.

3 is the shackle of the Ford car.

4 indicates what we call the base, giving the terms that we used in developing the shock absorber.

5 indicates the hanger bolt.

6, the outer spring.

7, the cage.

8, the base (4 being part of the base).

9, the top cap and name plate.

10, the bolt used in connection with the radius link.

11, bolt used for installing the base on the perch of the Ford car.

the perch shown is for a front absorber, that the rear absorber requires the removal of the perch that is on the Ford car now.

The witness then further testified as follows:

X Q. When did you first decide to call in an engineer and design this shock absorber, Exhibit 39?

A. Oh, it has been a year or so ago.

X Q. Is this the same absorber that you have been speaking about awhile ago, which the Temco were making?

A. No, this is a different shock absorber.

[fol. 252] X Q. This is entirely different?

A. Yes.

X Q. Is this cap 9 at the top of the spring 6 adjustable on the rod 5 or bolt 5?

A. It is put on there with threads.

X Q. But it is not supposed to be an adjustable cap?

X Q. I would not call it an adjustment, for different adjustments of weights, no.

X Q. That is taken care of by spring 6?

A. The size of the spring.

X Q. How many of these absorbers have you made altogether?

By Mr. Toulmin: I object to that. It is immaterial what this independent company has done so far as this is concerned. The witness is instructed that if he regards this his personal business outside of this suit, he need not answer.

By Mr. Keller:

X Q. Do you care to answer?

A. No.

Mr. Keller: I am satisfied.

The witness testified that Mr. Werner has nothing to do with the manufacture of this Edwards shock absorber in any capacity; he just handles the drills in the Tempco plant.

X Q. Would you mind telling me where you buy the conical coiled spring for the shock absorbers?

Objected to as a matter of private affairs of the Edwards Company, not involved in this suit and has nothing to do [fol. 253] with the issue in this case. Witness is instructed if he does not care to answer the question he need not do so.

X Q. Do you care to answer the question?

A. No.

Mr. Keller: I am content with the statement of counsel on the record.

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2 o'clock p. m. Sept. 19, 1924.

Session resumed.

O. P. Edwards resumed the stand and testified as follows:

By Mr. Toulmin:

R. D. Q. What is the reason for using the conical spring in this Edwards absorber, shown in this illustration this morning, defendant's Exhibit 39?

A. It gives us more room for the use of our rebound spring.

R. D. Q. Do you know what this is, Mr. Edwards?

(Hands paper to witness.)

A. It is a price list of repair parts, the Apco shock absorber.

By Mr. Toulmin: Plaintiff offers in evidence the price-list identified by the witness as Plaintiff's Exhibit No. 21.

Recross-examination:

The rebound spring is the one marked 13 on Exhibit 39 and the housing or cage 7 of exhibit 39 is conical in form to conform to the shape of the outer coil spring 6 and to con-[fol. 254] form with the base; that the cage 7 of Exhibit 39 merely seats in the base 8 and is held to the base by the coil spring 6; that the cage 7 is not a completely cylindrical cage, but is open on the front and back.

Defendant offered in evidence the advertisement of the Edwards Absorber as defendant's exhibit 39.

Counsel for defendant stated that the reporter at Buffalo made some errors in reporting counsel's statements; that the record, as reported, states that counsel for defendant does not attack the operativeness of the second and third types of the Temco shock absorbers, whereas, as he recalls it, he said he did not question the complete operativeness of these absorbers, that they were operative to a certain extent, but imperfectly.

JUDGE'S CERTIFICATE TO STATEMENT OF EVIDENCE

The foregoing is a complete narrative of all the testimony taken by affidavit, deposition and in open Court.

Approved this 29th day of December, 1924.

Sam'l H. Sibley, United States Judge.

Agreed to: Clifford L. Anderson, James A. Branch, M. A. Kellar, Attys. for Apco Mfg. Co. Toulmin & Toulmin, Troutman & Troutman, Spaulding, MacDougald & Sibley.

[fol. 255] IN UNITED STATES DISTRICT COURT

OPINION ON MOTION FOR PRELIMINARY INJUNCTION—Filed April 26, 1924

The Temco Electric Motor Company controls the Thompson patent, No. 1,072,791, for a shock absorber adapted to the Ford automobile. The Apco Manufacturing Company operates under a patent granted to William Storrie for a somewhat similar device. The Thompson patent has been held valid and infringed by shock absorbers claimed to be essentially like the Apco, in decisions of the Circuit Court of Appeals for the Sixth Circuit, Temco Company vs. K. W. Ignition Co., 243 Fed. 588; 283 Fed. 873. Counsel for both sides, however, have invited an independent consideration of this case, and I pass to that first.

Ease of riding in a road vehicle mounted on springs requires free vertical motion of the body of the springs combined with a fair stability as regards horizontal sways. The leaf spring combines these two desired results. The coiled or helical spring is more responsive and quicker acting but also more subject to side sway. Efforts to combine it with the leaf spring so as to obtain a better vertical resiliency and at the same time control its horizontal yielding, date long before the automobile but have been redoubled since that vehicle became common. The Ford car uses only one semi-elliptic spring over and parallel to each axle, with its ends turned down and each attached to a stanchion by a radius link, the effect of which attachment is to allow motion enough for the spring to expand longitudinally on compression but to limit either end or side sway of the body. The springs to have sufficient strength are stiff and the car "rides rough." Thompson, in his patent, sought to get the already well known superior results of a helical spring in conjunction with the leaf spring. The only place to put [fol. 256] the former was between the axle and the ends of the leaf spring. The stanchions of the Ford axle were replaced by others adapted to support the helical spring and maintain it vertical, while the sliding member, originally over and outside of the spring, was attached to the radius link of the leaf spring, free to move vertically as the

helical spring was compressed and incapable of lateral motion because it fitted snugly at top and bottom around the fixed stanchion. Thus the vertical resiliency was increased without any increase of the objectionable side sway. Later, instead of the stanchion being inside the spring and the sliding member outside, the stanchion was put outside the spring and the sliding member inside, but still guided by fitting the hollow stanchion at top and bottom. The device was thus turned inside out, but its principle was not altered. A patent was granted on four claims. Each claim is for a combination only. The general claim for a combination of helical and leaf spring on a car of this type was stricken because such combination was old in the art. The idea of working the helical spring by means of a hanger instead of compressing it by putting it directly between the leaf spring and the axle was also old, appearing in several former patents. The stanchion to guide the leaf spring and limit side sway had been provided by Mr. Ford himself. The novel idea in the combination seems to me to be only in the use of a hanger adapted to slide on the stanchion so as to avoid any additional side sway. This is expressly and distinctly claimed as an essential part of the combination in Claims 1, 2 and 4 of the patent, and these claims seem to me to be valid. Claim 3 omits it and specifies no means whereby the stanchions shall guide the motion of the springs, but claims generally the stanchions as guiding the spring in its vertical movement. As just said, Mr. Ford [fol. 257] himself had used them for this purpose. For want of any statement as to how the leaf spring and helical spring are to be connected to and guided by the stanchions I think Claim 3 is incomplete and void.

Now Storrie also, using the old idea of a helical spring operated by a hanger, prevented additional side sway not by making the hanger a sliding member but by guiding the lower end by a radius link attached to the stanchion. This link served to allow the free vertical motion equally as well as the sliding device, but controlled horizontal motion better because there was so much less friction and wear, and because the stanchion no longer extended to the top of the expanded spring where it was liable to strike the body when

the spring was compressed. Thompson and others seeking to obviate these difficulties had also hit upon the radius link control and sought to patent it. On a hotly contested interference priority was awarded to Storrie. The parties to that contest, and the Patent Office also, seem to have thought the radius link idea a patentable advance in the art, and no interference with the original Thompson patent with its sliding member seems to have been suggested. Whether the radius link so used is a patentable novelty is not for decision here, but my own opinion agrees with that apparently entertained in the Patent Office that it is at last no infringement of Thompson's patent which includes in place of it the sliding device.

There is no virtue in the placing of the helical spring between the axle and the leaf spring. If the whole combination were turned up side down and the centre of the leaf spring bolted to the axle and the stanchions to the body, the action of the springs would be the same. The springs act at all only when they are put under compression between [fol. 258] the axle and the body. It does not matter whether the axle comes up or the body comes down. When compression occurs the weaker spring first yields until its tension is such that the stronger spring begins to compress also. The weak helical spring absorbs quick, slight shocks which would be transmitted without complete absorption by the stiffer and slower acting leaf spring. It would do this any where in the line between the axle and the body. On the other hand there is no radical deviation in the beehive form. Its broad base gives it horizontal stability, but probably does not greatly affect its action as a spring. The elasticity involved is mostly that of torsion, depending generally on the length and section of the rod of which the spring is made. The case seems to me to depend on whether the use of the radius link to control side sway infringes a patent for a combination using for the purpose the sliding member when that member was the only patentable novelty. I would think not.

But while this is my opinion, I think I should yield it to the better opinion of the judges of the Sixth Circuit, and am controlled to the contrary by the decision in the case of

Temco Company vs. K. W. Company, supra. The Thompson patent was there held valid generally, without special analysis of its different claims, and apparently without regarding the sliding member as of material importance. In the second appearance of the case there the radius link, under the Storrie patent, was dealt with as a valuable addition, so that only a royalty for the use of the other elements of the Thompson patent was allowed in an accounting, instead of allowing the entire profits on the whole shock absorber. This shows that the radius link was not considered a mere mechanical equivalent for the sliding hanger. The Court must have thought Thompson's combination pat-[fol. 259] entable independently of the sliding member specified for it. While I do not fully understand this conclusion, I will defer to it, holding the Thompson patent infringed by the Apco shock absorber.

But I will refuse a preliminary injunction. The defendant, with the knowledge of the plaintiff, has engaged for many years in extensive advertising and manufacture of the Apco absorber. The Apco Company is not claimed to be insolvent and no irreparable damage is shown to be imminent. I think it would do more injustice to suddenly stop the defendant's business than to allow them to close it out pending this case, and account for such profits or royalties as it may appear to be liable for. An order may be entered accordingly.

This 26th day of April, 1924.

Sam'l H. Sibley, U. S. Judge.

In United States District Court

Order Denying Preliminary Injunction—Filed May 3, 1924

This cause having come on for a hearing on the Plaintiff's motion for a preliminary injunction, and the matter having been considered by the Court, the Court is of the opinion that the motion for a preliminary injunction should be denied, and it is so ordered.

This 3 day of May, 1924.

Sam'l H. Sibley, U. S. Judge.

[fol. 260] IN UNITED STATES DISTRICT COURT

DECREE—Filed October 31, 1924

This cause having come on for trial before the Court on September 29, 1924, upon the pleadings and proof adduced by both parties, partly by depositions and partly by witnesses examined in the presence of the Court; and briefs for both parties having been filed on their behalf with the Court by counsel; and having been taken under advisement and the whole case examined and reviewed in the light of the proceedings and determination of the Court had on the preliminary injunction motion filed by plaintiff, it is now ordered, adjudged and decreed as follows:

(1) That Letters Patent, No. 1,072,791 to Ralph P. Thompson and William S. Thompson, for Improvements in Shock Absorbers for automobiles, dated September 9, 1913, are, with the exception of Claim 3 thereof, good and valid as adjudicated in the decision and decree of the United States Circuit Court of Appeals for the Sixth Circuit in the case of this plaintiff vs. The K W Ignition Company, and Joseph A. Williams (243 Fed. 588), affirming the decision in that cause of the United States District Court for the Northern District of Ohio, Eastern Division, which holdings this Court follows for purposes of its decision herein as set forth in the opinion this Court has filed herein on plaintiff's aforesaid preliminary injunction motion.

(2) That the entire right, title and interest in and to said invention and said Letters Patent is vested in the plaintiff herein, as also adjudicated in said other cause.

[fol. 261] (3) That plaintiff's said patent to Thompson, No. 1,072,791 has been and is infringed by the defendant herein by the manufacture and sale of what is known on this record as the Apco shock absorber, in which conclusion this Court refers its independent judgment as expressed in the opinion in interpreting and applying this patent to the judgment and decisions of the Courts in the Sixth Circuit in the case above named, as also stated in this Court's opnion on the preliminary injunction motion.

(4) That as to claim 3 of said Thompson patent, this Court's independent judgment is that such claim is "incom-

plete and void" as stated in its said injunction motion opinion.

(5) That the Apco shock absorber, this Court finds from the record herein, was manufactured and sold by this defendant at its factory in Providence, Rhode Island, and sold and distributed by its branch establishment located in the City of Atlanta, Georgia, and constituting an established place of business where infringing acts were and have been committed in this judicial district and within the jurisdiction of this Court before and since the filing of the Bill of Complaint herein.

(6) That plaintiff is entitled to an accounting of the profits and damages made and caused by the defendant from the manufacture and sale of said infringing shock absorbers and of the damages plaintiff has suffered by reason of said infringing acts of the defendant, to which end, said cause is referred to Cam Dorsey, Standing Master, to [fol. 262] take such accounting and to state and report to this Court his conclusions and findings thereon.

(7) That the opinion handed down by the Court upon the application for a preliminary injunction, dated April 26, 1924, is adopted as the opinion of the Court in the rendition of this decree.

(8) That the Clerk of this Court forthwith tax the costs herein in favor of plaintiff.

(9) That a permanent injunction, as prayed for in the bill of complaint, is suspended from the date hereof until and including Nov. 13th, 1924, and in case the defendant, during said period, shall take an appeal from this decree and shall give bond, with good and sufficient surety, to be approved by the Court, in the sum of Ten Thousand Dollars, in favor of the plaintiff in this cause and conditioned upon the payment by the defendant to the plaintiff of all damages and profits from the manufacture and sale of the infringing device from this date and during the pendency and determination of the appeal, such injunction shall be further suspended during the pendency of such appeal and until the mandate of the Court of Appeals has been returned to this Court; but if, within said period, the defend-

ant shall fail to enter an appeal and give such good and sufficient bond, then a permanent injunction, as prayed for in the bill of complaint, is ordered and directed to be forthwith issued, enjoining and restraining the defendant from the further manufacture, use or sale of such Apco infringing shock absorber, or any other shock absorbers constituting an infringement of said Thompson patent.

[fol. 263] October 31, 1924.

Sam'l H. Sibley, United States Judge.

In United States District Court

Order Extending Time—Filed November 15, 1924

It is ordered that the Apco Manufacturing Company have until Tuesday, November 18th, 1924, in which to perfect an appeal from the decree in said case, and the term of Court at which the decree was entered is extended accordingly.

This Novmber 13th, 1924.

Sam'l H. Sibley, U. S. Judge.

[fol. 264] In United States District Court

Plaintiff's Exhibit No. 1

F. W. Schaefer, Notary Public, Montgomery County, Ohio
(Notarial Seal)

United States District Court, Northern District of Georgia, Northern Division

In Equity. No. 271

The Temco Electric Motor Co.

vs.

Apco Manufacturing Co.

Apco Manufacturing Company, Automotive Equipment, Providence, U. S. A.

Received 12/12/23

Atl. Ga.
Sold to F. A. Lyns
Ship via
Biller
Posting Checked
Quantity Stock No.

Your No.
Our No. 8642
Back Order No.

Shipped
Shipper
Checker

Price Total

1 No. 100 Rear Only Touring Shock Abs. 5.00

Paid
A. P. L.

Plaintiff's Exhibit No. 1.
(Notarial Seal.) 3.
Filed in Clerk's Office Feb. 26, 1924.

[fol. 265] PLAINTIFF'S EXHIBIT No. 9

UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF GEORGIA, NORTHERN DIVISION

In Equity. No. 271

THE TEMCO ELECTRIC MOTOR CO.

vs.

APCO MANUFACTURING CO.

Plaintiff's Exhibit No. 9

F. W. Schaefer, Notary Public, Montgomery County, Ohio
(Notarial Seal)

Department of the Interior, United States Patent Office

To all persons to whom these present shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an Instrument in Writing Recorded December 9, 1912, in Liber T-90, page 402 of Transfers of Patents.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this fourteenth day of January in the year of our Lord, one thousand nine hundred and twenty-four and of the Independence of the United States of America the one hundred and forty-eighth.

Wm. A. Kinnan, Acting Commissioner of Patents.
(Seal.)

T 90-402.

[fol. 266] Whereas, we, R. P. Thompson and W. S. Thompson of Leipsic, county of Putnam and State of Ohio have invented a certain new and useful improvement in Automobiles for which we have made application for letters patent of the United States; and whereas Oliver P. Edwards of Leipsic, county of Putnam and State of Ohio is desirous of acquiring an interest in said invention and in the letters patent to be obtained therefor;

Now, therefore, to all whom it may concern, be it known that for and in consideration of the sum of one dollar to us in hand paid, the receipt of which is hereby acknowledged, we the said R. P. Thompson and W. S. Thompson have sold, assigned and transferred and by these presents do sell, assign and transfer unto the said Oliver P. Edwards one third of the full and exclusive right to the said invention as fully set forth and described in the specifications prepared and executed by us and filed on the tenth day of October, nineteen hundred and twelve, serial number 724,979 preparatory to obtaining letters patent of the United States therefor; and we do hereby authorize and request the Commissioner of Patents to issue the said letters patent to the said Oliver P. Edwards as the assignee of our one third right, title and interest in and to the same for the sole use and behoof of the said Oliver P. Edwards and his legal representatives.

In testimony whereof, we have hereunto set our hands and affixed our seal this seventh day of December nineteen hundred and twelve.

William S. Thompson, Ralph P. Thompson.

[fol. 267] In presence of J. L. Mosher, W. W. McCreary.

Recorded December 9, 1912.

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Department of the Interior, United States Patent Office

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an Instrument of Writing Recorded March 26, 1914, in Liber O-94, page 263 of Transfers of Patents.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this fourteenth day of January in the year of our Lord, one thousand nine hundred and twenty-four and of the Independence of the United States of America the one hundred and forty-eighth.

Wm. A. Kinnan, Acting Commisisoner of Patents.
(Seal.)

O 94-263.

Assignment

Whereas we, Ralph P. Thompson, William S. Thompson, and Oliver P. Edwards, of Leipsic, Ohio, are now the owners [fol. 268] of the entire right, title and interest in and to U. S. Letters Patent No. 1,072,791, for Automobiles, issued Sept. 9th, 1913, to us on the application of Ralph P. Thompson and William S. Thompson, filed Oct. 10, 1912, Ser. No. 724,979, an undivided one-third interest in the invention and expected patent having been assigned to said Oliver P. Edwards by an assignment dated Dec. 7, 1912, and recorded Dec. 9, 1912, in Liber T 90, page 420 of Transfers of Patents in the United States Patent Office;

And whereas The Temco Electric Motor Company, an Ohio corporation, of Leipsic, Ohio, is desirous of acquiring the entire interest in the same;

Now, therefore, in consideration of ten dollars, and other good and valuable considerations to us in hand paid, the receipt whereof is hereby acknowledged, we hereby assign, sell, and set over unto said The Temco Electric Motor Company, its assigns and legal representatives, all of the right, title and interest in and to said invention for the United States and their territories and in and to said Letters Patent, and in and to all and every right of action, at law and in equity, heretofore accrued by reason of any and all infringements of said Letters Patent, together with the right to sue therefor in our names, if necessary and to possess and have any and all recovery growing out of such infringement.

In testimony whereof, we executed this assignment this 18th day of March, 1914.

Ralph T. Thompson (Seal), William S. Thompson (Seal), Oliver P. Edwards (Seal).

[fol. 269] State of Ohio,
County of Putnam, ss:

On the 18th day of March, 1914, before me, the subscriber, a Notary Public, in and for said county, personally came Ralph P. Thompson, William S. Thompson, and Oliver P. Edwards, personally known to me to be the said assignors in the foregoing assignment, and acknowledged the signing thereof to be their voluntary act and deed.

In testimony whereof, I have hereunto subscribed my name and affixed my seal on the date last aforesaid.

A. Stechschulte, Notary Public, Putnam County, Ohio. (Notarial Seal.)

Putnam County, Ohio.
Recorded March 26, 1914.

Plaintiff's Exhibit 9. Filed in Clerk's Office Feb. 26, 1924.

[fol. 270] PLAINTIFF'S EXHIBIT No. 10

U. S. DISTRICT COURT, NORTHERN DISTRICT OF GEORGIA, NORTHERN DIVISION

In Equity. No. 271

THE TEMCO ELECTRIC MOTOR CO.

vs.

APCO MANUFACTURING CO.

Plaintiff's Exhibit No. 10

F. W. Schaefer, Notary Public, Montgomery County, Ohio (Notarial Seal)

UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF OHIO, WESTERN DIVISION

In Equity. No. 344

THE TEMCO ELECTRIC MOTOR CO.

vs.

THE PENNSYLVANIA RUBBER & SUPPLY CO.

Permanent Injunction

The President of the United States to the Pennsylvania Rubber & Supply Company, its clerks, agents, attorneys, servants, and workmen, Greeting:

Whereas it has been represented to us in the District Court of the United States for the Northern District of

Ohio, Western Division, that letters patent No. 1,072,791, to Ralph P. Thompson and William S. Thompson, were issued in due form of law on the 9th day of September, 1913, for an improvement in automobiles, and that the same are now owned by the plaintiff herein, and that you, [fol. 271] The Pennsylvania Rubber & Supply Company, have infringed the rights secured by the aforesaid letters patent by selling to others shock absorbers embodying the invention set forth and claimed in the said letters patent, contrary to the form of the statute in such cases made and provided:

Now, therefore, you, the said The Pennsylvania Rubber & Supply Company, your clerks, agents, attorneys, servants, and workmen are strictly commanded and enjoined under the pains and penalties which may fall upon you, and each of you, in case of disobedience, that you forthwith desist from making, using and selling shock absorbers embodying the invention of said letters patent, substantially as described and claimed in said letters patent; and particularly from making, using, or selling Apco shock absorbers such as those shown in Plaintiff's Exhibit Nos. 3 and 5, and from in any wise infringing said letters patent.

Witness the Honorable John M. Killits, Judge of the District Court of the United States, this 4th day of December, 1923, and in the 148th year of the Independence of the United States of America.

B. C. Miller, Clerk U. S. District Court, by (Signed) J. W. Wilson, Deputy Clerk U. S. District Court. (Seal.)

The United States of America,
Northern District of Ohio, ss:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Permanent Injunction filed in the above entitled cause in said Court, and that the [fol. 272] same is correctly copied from the original now on file in my office.

Witness my official signature, and the seal of said Court at Toledo, in said District, this 20 day of February, A. D.

1924, and in the 148th year of the Independence of the United States of America.

B. C. Miller, Clerk, by Mildred Iler, Deputy Clerk. (Seal.)

(On back or cover of certified copy of Permanent Injunction:) No. 344. United States District Court, Northern District of Ohio, Western Division. The Temco Electric Motor Co. vs. The Pennsylvania Rubber & Supply Co. Certified Copy of Permanent Injunction. December 26, 1923. B. C. Miller, Clerk.

U. S. Marshal's Return

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

Received this writ at Toledo, Ohio, Dec. 4, 1923, and on Dec. 17, 1923, I served the within named The Pennsylvania Rubber & Supply Co. by delivering to J. T. Pittaway, as manager, a true and certified copy hereof with all indorsements thereon, I served J. T. Pittaway, personally.

George A. Stauffer, U. S. Marshal, by J. L. Cass, Deputy.

Marshal's Fees:

Service	$2.00
Travel	.06
	$2.06

[fol. 273] PLAINTIFF EXHIBIT No. 11

UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF GEORGIA, NORTHERN DIVISION

In Equity. No. 271

THE TEMCO ELECTRIC MOTOR CO.

vs.

APCO MANUFACTURING CO.

Plaintiff's Exhibit No. 11

F. W. Schaefer, Notary Public, Montgomery County, Ohio (Notarial Seal)

UNITED STATES DISTRICT COURT, WESTERN DISTRICT OF KENTUCKY

In Equity. No. 247

THE TEMCO ELECTRIC COMPANY

vs.

BELKNAP HARDWARE AND MANUFACTURING COMPANY

Preliminary Injunction

The President of the United States to the Belknap Hardware and Manufacturing Company and its clerks, agents, attorneys, servants, and workmen, Greeting:

Whereas it has been represented to us in the District Court of the United States for the Western District of Kentucky, that letters patent No. 1,072,791, to Ralph P. Thompson and William S. Thompson, were issued in due form of law on the 9th day of September, 1913, for an improvement in Automobiles, and that the same are now owned by the plaintiff herein and that you, the Belknap Hardware and Manufacturing Company, have infringed the rights secured by the aforesaid letters patent by selling to others shock absorbers embodying the invention set forth and

[fol. 274] claimed in the said letters patent, contrary to the form of the statute in such cases made and provided:

Now, therefore, you, the said Belknap Hardware and Manufacturing Company, your clerks, agents, attorneys, servants, and workmen are strictly commanded and enjoined under the pains and penalties which may fall upon you, and each of you, in case of disobedience, that you forthwith, and until the future order, judgment and decree of this Court, desist from making, using and selling shock absorbers embodying the invention of said letters patent, substantially as described and claimed in said letters patent; and particularly from making, using, or selling Apco shock absorbers such as those shown in Plaintiff's Exhibits Nos. 3 and 5 filed herein in connection with plaintiff's motion for this injunction, and from in any wise infringing said letters patent.

Witness the Honorable Charles H. Moorman, Judge of the District Court of the United States, this 13th day of February, 1924, and in the 149th year of the Independence of the United States of America.

——— ———.

United States of America,
Western District of Kentucky, ss:

I, A. G. Ronald, Clerk of the District Court of the United States, for said Western District of Kentucky, do hereby certify the above and foregoing to be a true and complete copy of the injunction issued in said Court on the 13th day of February, A. D. 1924, in the cause wherein The Temco Electric Motor Company is the plaintiff and Belknap Hardware & Mfg. Co. is the defendant, as the same appears from the original now remaining in my custody and control. [fol. 275] In testimony whereof, I have hereunto set my hand and affixed the seal of said Court, this 13th day of February, A. D. 1924.

A. G. Ronald, Clerk. (Seal.)

Filed in Clerk's Office, Feb. 26, 1924.

PLAINTIFF'S EXHIBIT No. 12

United States District Court, Northern District of Georgia, Northern Division

In Equity. No. 271

THE TEMCO ELECTRIC MOTOR CO.

vs.

APCO MANUFACTURING CO.

Plaintiff's Exhibit No. 12

F. W. Schaefer, Notary Public, Montgomery County, Ohio (Notarial Seal)

UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF OHIO, EASTERN DIVISION

In Equity

THE TEMCO ELECTRIC MOTOR CO.

vs.

THE I. J. COOPER RUBBER CO.

Preliminary Injunction

The President of the United States to the I. J. Cooper Rubber Company and its clerks, agents, attorneys, servants, and workmen, Greeting:

Whereas it has been represented to us in the District Court of the United States for the Northern District of Ohio, [fol. 276] Western Division, that letters patent No. 1,072,791, to Ralph P. Thompson and William S. Thompson, were issued in due form of law on the 9th day of September, 1913, for an improvement in automobiles, and that the same are now owned by the plaintiff herein and that you, The I. J. Cooper Rubber Company, have infringed the rights secured by the aforesaid letters patent by selling to others shock absorbers embodying the invention set forth and claimed in the said letters patent, contrary to the form of the statute in such cases made and provided:

Now, therefore, you, the said The I. J. Cooper Rubber Company, your clerks, agents, attorneys, servants, and workmen are strictly commanded and temporarily enjoined under the pains and penalties which may fall upon you, and each of you, in case of disobedience, that you forthwith, and until the further order, judgment, and decree of this Court, desist from making, using and selling shock absorbers embodying the invention of said letters patent, substantially as described and claimed in said letters patent; and particularly from making, using, or selling Apco shock absorbers such as those shown in Plaintiff's Exhibits Nos. 3 and 5 filed herein in connection with plaintiff's motion for this injunction, and from in any wise infringing said letters patent.

Witness the Honorable John E. Sater, Judge of the District Court of the United States, this 18th day of February, [fol. 277] 1924, and in the 149th year of the Independence of the United States of America.

B. E. Dilley, Clerk U. S. District Court, by C. P. White, Jr., Deputy Clerk U. S. District Court. (Seal.)

Attest: ——— ———.
Filed in Clerk's Office Feb. 26, 1924.

PLAINTIFF'S EX. 19-1

Telephone: Bell, Tupper 3410

Florian, Cigars, 363 Fargo Avenue, Buffalo, N. Y.

May 15th, 1917.

Temco Co.

GENTLEMEN: We have a set of four of your Shock Absorbers on one of our delivery cars for the past three years and have given us good service but are in need of repair, two of the springs being gone, one of the shafts bent also a cap missing and the bushings worn out.

We would like to know if you can put them in condition again for us at a sufficient saving over the cost of new ones.

Will you kindly give use some idea of what the cost will be and oblige,

H. M. Florian.

P. McG. H. M. F.

[fol. 278] U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EXHIBIT No. 19-2

May 16, 1917.

H. M. Florian, 363 Fargo Ave., Buffalo, N. Y.

DEAR SIR: We are in receipt of yours of the 15th instant relative to a set of our shock absorbers which you have been using, and we are pleased to enclose herewith a price list covering the repair parts for Temco's.

We believe that you can pick out the parts you require from this price list, and can fit the parts on yourself.

However, if you would prefer a proposition on an exchange for a complete new set of the later type Temco's such as described on the enclosed circular having the telescoping dust caps, we would be glad to make you a special price on such an exchange, in view of the fact that you are a user of our Shock Absorbers. The list price of these shock absorbers is now $10.00 for the complete set of four, but on an exchange proposition of this sort, we would be glad to send you a complete new set for the price of $6.50. This is a special reduction to you because you are a user of our shock absorber, and we would not make it otherwise.

We are enclosing herewith also folders descriptive of the Temco Tool Bag and the Temco Lock Switch, both of which you will find useful.

[fol. 279] Hoping to have the pleasure of serving you, we beg to remain

Yours very truly, The Temco Electric Motor Co.

Enc. TP-T-TB-L.

U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. Plaintiff's Ex. 19-2. H. L. Hammaker, Notary Public, Montgomery County, Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-3

Telephone: Bell, Tupper 3410

Florian, Cigars, 363 Fargo Avenue, Buffalo, N. Y.

(R. A. P.-J)

July the 21st, 1917.

The Temco Electric Motor Co., Leipsic, Ohio.

GENTLEMEN: Relative to a letter I wrote you in May regarding repairs to a set of Temco Absorbers and your proposition of an exchange for a set of your latest No. 3 1917 Models for our old set and $6.50.

[fol. 280] Our No. 2 car (with the set) is being overhauled and painted and I've decided to take you up on your proposition. Am sending you the old set today via Well-Fargo Express Prepaid. Enclosed find check for $6.50. Kindly hurry along new set at once so that they may be put on before the car leaves the shop and oblige,

Yours truly, H. M. Florian.

HMF/PMcG.

Invoiced Jul. 24, 1917.

U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. vs. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-4

Telephone: Bell, Tupper 3410

Florian, Cigars, 363 Fargo Avenue, Buffalo, N. Y.

August the 17th, '19.

Temco Electric Motor Co., Leipsic, Ohio.

Replying to RAP-1

GENTLEMEN: We are expressing you today worn set of No. 2 Temco Shock Absorbers as proposed by you in your [fol. 281] favor of the 12th inst. offering an exchange on our worn set and $6.25 for a new set of No. 3.

Kindly hurry them along as car is all assembled and ready,

Yours truly, H. M. Florian.

H. M. F./PMcG.

Invoiced Aug. 28, 1919.

U. S. District Court, Northern District of Ga. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-5

Phone: Tupper 3410

Florian Cigar Co., Cigars, 363 Fargo Avenue, Buffalo, N. Y.

Sep. 15, 1920.

Temco Elec. Co.

GENTLEMEN: Enclosed find check for $3.75 which with the check for $6.25 already sent you is to cover charges on set of (4) 1916 Model Shock Absorbers with Grease Cups.

Please ship these along as quickly as possible.

Yours truly, Florian Cigar Co.

H. M. F.

Invoiced Sep. 22, 1920.

[fol. 282] U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-6

Phone: Tupper 3410

Florian Cigar Co., Cigars, 363 Fargo Avenue, Buffalo, N. Y.

Sep. 8th, '20.

Temco Elec. Motor Co., Leipsic, Ohio.

GENTLEMEN: Enclosed find check for $6.25 for new set of Model 1916 Temco Shock Absorbers. This is on the exchange proposition you made us.

As the car on which they are to be placed is in daily use will it be all right to continue using present set until new ones arrive and then express them to you?

Yours truly, Florian Cigar Co. H. M. Florian.

Please hurry above and oblige.

U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

[fol. 283] PLAINTIFF'S EXHIBIT No. 19-7

RAP:M

September 10, 1920.

Florian Cigar Company, 363 Fargo Avenue, Buffalo, New York.

GENTLEMEN: We are in receipt of yours of September 8th, with your check in the amount of $6.25 enclosed ordering two new sets of Temco Shock Absorbers on an exchange proposition which we made to you under date of August 12, 1919.

Since we made our proposition on August 12, 1919 which is now over a year ago, the price of Temcos has increased to $20.00 for the complete set of four and an exchange proposition such as this would be made on the basis of $10.00 for the new set.

It will not be necessary for you to return the old sets you have on your car to complete this exchange proposition as if you wish you can sell them to some one who owns a second hand Ford car and thus realize a little bit on the sale.

If you desire us to send you through one set at the new price of $10.00 will you kindly advise as we could not accept the order for the new set at the price of $6.25 on the exchange proposition.

Yours very truly The Temco Electric Motor Co.,
Service Department.

[fol. 284] U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. In Equity. No. 271. Plaintiff's Ex. 19-7. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-8

Telephone: Bell, Tupper 3410

Florian, Cigars, 363 Fargo Avenue, Buffalo, N. Y.

August the 11th, 1919.

Temco Elec. Co., Leipsic, Ohio.

GENTLEMEN: In tearing down one of our delivery cars (No. 4 equipped with Temco Shock Absorbers) we find the bushings badly worn and the cross arms shackles also on rear set and one of the bushings in front, this is from two years continuous service. Can we buy new bushings and shackles for them? Thanking you for a prompt reply,

Your truly, H. M. Florian.

H. M. F/P. McG.

U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

[fol. 285] PLAINTIFF'S EXHIBIT No. 19-9

RAP:I.

H. M. Florian, 363 Fargo Ave., Buffalo, N. Y.

DEAR SIR: We are in receipt of yours of the 11th inst. relative to a set of Temco Shock Absorbers you have been using for approximately two years, and we wish to advise that we can furnish the repair parts for these shock absorbers as per the enclosed price list. But in ordering these repairs it will be necessary for you to state whether the parts are wanted for the front or rear shock absorber, and whether they are for the 1914 type Temco's on which the caps are fastened with two small screws at the side or for the 1915 type Temco's on which the caps telescope the main housing of the shock absorber.

It might be that your shock absorbers are worn to such an extent that you would consider purchasing a complete new set, and as we are in a position to make you a special proposition on a complete new set of these shock absorbers on account of the fact that you are a user of our shock absorber.

The list price of the complete new set of shock absorbers such as shown on the enclosed circular is $12.50 for the complete set, but on an exchange of this sort, we would be willing to send you through a complete new set at the special price of $6.25. Please let us know what your wishes are in the matter, so that we can take care of your accordingly.

Yours very truly, Temco Electric Motor Co., Service Dept.

[fol. 286] U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. Plaintiff's Ex. 19-9. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Nortarial Seal.)

PLAINTIFF'S EX. 19-10

Aug. 26, 1919.

The Temco Electric Motor Co.,
Portable Electric Tools,
Small Motors—Auto Accessories
Leipsic, Ohio.

Sold to: H. M. Florian,
363 Fargo Ave.,
Buffalo, N. Y.

Invoice No. 7441-S.
Your Order 8/17/19.
Terms Cash Paid.

Interest Charged on Overdue Accounts

1. Set Temco Shock Absorbers, touring (1916) (Special Price) 6.25
O K
X Coll 8/28/19. Cas
RCM.
Express Collect.
Same
Invoiced Aug. 20, 1919.
Via.
Shipped to
Factory Order.

[fol. 287] U. S. District Court, Northern District of Georgia. Temco Electric Mfg. Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Seal.)

PLAINTIFF'S EX. 19-11

The Temco Electric Motor Co.,
Portable Electric Tools.
Small Motors—Auto Accessories
Leipsic, Ohio.

Temco.
Sold to: H. M. Florian,
363 Fargo Ave.,
Buffalo, N. Y.

Invoice No. 7861-S.
Your Order 9/15/20
Terms Cash Paid.

Interest Charged on Overdue Accounts.

1 set Temco Shock Absorbers, touring 1920.
(Special price in exchange).
O K
X Coll 9/27/20.
RCM.
Invoiced Sep. 22, 1920.
Express Collect
Same
Via.
Shipped to
Factory Order.

[fol. 288] U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 271. H. L. Hammaker, Notary Public, Montgomery Co., Ohio. (Notarial Seal.)

PLAINTIFF'S EX. 19-12

The Temco Electric Motor Co.,
Manufacturers

Temco Portable Electric Drills and Motors,
Shock Absorbers Auto Accessories.
Leipsic, Ohio.

Jul. 24, 1917.

Sold to: H. M. Florian,
363 Fargo Ave.,
Buffalo, N. Y.

Invoice No. 6196-S.
Our Order
Your Order
Terms

Interest Charged on Overdue Accounts.

1 Set Temco Shock Absorbers, Touring—1916 Type.
(Special Price in Exchange.)
Ser. No. 18955.
O. K. Am. X Coll
B. G. T.
7-24-17.
[fol. 289] Express Collect.
Same
Invoiced Jul. 24, 1917.
Via
Shipped to
Factory Order.

U. S. District Court, Northern District of Georgia. Temco Electric Motor Co. v. Apco Mfg. Co. In Equity. No. 217. H. L. Hammaker, Notary Public, Montgomery Co., Ohio.

Filed in Clerk's Office, Sep. 29, 1924.

PLAINTIFF'S EX. NO. 22

THE UNITED STATES OF AMERICA,
Northern District of Ohio,
Eastern Division, ss:

At a stated term of the District Court of the United States, within and for the Eastern Division of the Northern District of Ohio, begun and held at the City of Cleveland, in said District, on the first Tuesday in April, being the 6th day of said month, in the year of our Lord one thousand nine hundred twenty, and for the Independence of the United States of America the one hundred and forty-four, to-wit: on Thursday, the 30th day of Sept., A. D. 1920—Present: Honorable D. C. Westenhaver, United States District Judge—among the proceedings then and there had were the following, to-wit:

[fol. 290] IN THE DISTRICT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF OHIO, EASTERN DIVISION

No. 552

THE Q AND C COMPANY, a Corporation, Complainant,

vs.

THE FOREST CITY MACHINE & FORGE CO., a Corporation, Defendant

Order Authorizing Receiver to Compromise Claim of the Temco Electric Motor Company

This cause came on to be heard upon the application of the Receiver herein for an order authorizing the said Receiver to dismiss the appeal of the defendant company in the action of The Temco Motor Company, Complainant vs. The Forest City Machine & Forge Company and L. A. Westman, defendants, and to settle and compromise the claim of the complainant for damages, or an accounting therefor, and the Court finds that it is for the best interest of said Receivership and creditors of defendant, that such settlement be made and effected, and that said defendants have agreed thereto.

Wherefore said Receiver is hereby ordered and directed to effect such compromise and settlement with said The Temco Electric Motor Company, to dismiss said appeal and to pay unto the said The Temco Electric Motor Company the sum of Thirty-five Hundred Dollars ($3,500.00), upon release by said The Temco Electric Motor Company of all damages, claims and demands whatsoever against said defendant company, said Receiver or said Receivership estate.

D. C. Westenhaver, J.

[fol. 291] The United States of America,
Northern District of Ohio,
Eastern Division:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify that I have compared the within and foregoing transcript with the original Order authorizing Receiver to Compromise claim of The Temco Electric Motor Company, entered upon the Journal of the proceedings of said Court in the therein entitled cause, at the term and on the day therein named, and do further certify that the same is a true, full and complete transcript and copy thereof.

Witness my official signature, and the seal of said Court at Cleveland, in said District this 22nd day of September, A. D. 1924, and the 149th year of the Independence of the United States of America.

B. C. Miller, Clerk, by C. A. Wilder, Deputy Clerk.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

Plaintiff's Exhibit No. 23

The United States of America,
Northern District of Ohio,
Eastern Division, ss:

At a stated term of the District Court of the United States, within and for the Eastern Division of the Northern District of Ohio, begun and held at the City of Cleve-

land, in said District, on the first Tuesday in April, being [fol. 292] the 6th day of said month, in the year of our Lord one thousand nine hundred twenty, and of the Indpendence of the United States of America, the one hundred and forty-four, to-wit: on Monday, the 1st day of June, A. D. 1920.—Present: Honorable D. C. Westenhaver, United States District Judge.—Among the proceedings then and there had were the following, to-wit:

Entry

In the District Court of the United States for the Northern District of Ohio, Eastern Division

No. 552

The Q and C Company, a Corporation, 90 West Street, New York City, N. Y., Plaintiff,

vs.

The Forest City Machine & Forge Company, a Corporation, Defendant

This cause came on to be heard upon the application of the plaintiff in its petition for a Receiver and the Defendant herein having filed an Answer and consenting to said appointment and further, upon due consideration by the Court, said application is granted and F W. Treadway is appointed Receiver herein; and it is ordered upon his giving and undertaking according to law in the sum of $20,000.00, with surety, to the approval of the Clerk of this Court, he shall proceed to take possession of all the property of whatever kind of the defendant and that the said defendant and all other parties having any of said property in their possession or under their control are ordered to deliver the same to said Receiver upon his demand.

[fol. 293] It is further ordered that said Receiver upon taking possession of said property proceed to administer the affairs and business of the defendant for the benefit of all creditors for such period as the Court may direct; that said Receiver shall take an inventory of all the assets of said company and also an inventory of all debts due from said company to each and all of its creditors; that he collect

all the money in whatever form due to said company and perform such other duties as are required by him in such appointment and the orders of the Court.

D. C. Westenhaver, Judge.

THE UNITED STATES OF AMERICA,
Northern District of Ohio,
Eastern Division:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify that I have compared the within and foregoing transcript with the original entry appointing a receiver entered upon the Journal of the proceedings of said Court in the therein entitled cause, at the term and on the day therein named, and do further certify that the same is a true, full and complete transcript and copy thereof.

Witness my official signature, and the seal of said Court at Cleveland, in said District this 22nd day of September, A. D. 1920, and the 149th year of the Independence of the United States of America.

B. C. Miller, Clerk, by C. A. Wilder, Deputy Clerk.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

[fol. 294] PLAINTIFF'S EXHIBIT No. 24

IN THE DISTRICT COURT OF THE UNITED STATES, NORTHERN DISTRICT OF OHIO, EASTERN DIVISION

No. 552

THE Q AND C COMPANY, a Corporation, Complainant,

vs.

THE FOREST CITY MACHINE & FORGE CO., a Corporation, Defendant

Application of Receiver to Compromise Claim of the Temco Electric Motor Co.

Now comes F. W. Treadway and represents that he is the duly appointed and qualified Receiver of The Forest

City Machine & Forge Company in the above-entitled action.

That in an action in said District Court for the Northern District of Ohio, Eastern Division, entitled The Temco Electric Motor Co. complainant vs. The Forest City Machine & Forge Company and L. A. Westman, Defendants, the said complainant recovered a decree against said defendants sustaining the validity of certain patents sued upon, and finding that certain shock absorbers manufactured by defendants infringed thereon and restraining said defendants from continuing to manufacture and sell the same; that subsequently the defendants took an appeal from said judgment and decree to the United States Circuit Court of Appeals and filed their bond therein as fixed by this Court.

That your Receiver must now elect whether to perfect said appeal and says that he has conferred with the printer as to the cost of printing the record in said case and with defendant's attorney's as to the probable costs of the preparation and printing of brief and argument of said appeal, [fol. 295] and that in his opinion the cost and expense of such appeal will approximate about thirty five hundred dollars ($3500.00)

That defendants have ceased to manufacture said shock absorbers, and except for an accounting for damages are not interested further in the prosecution of such appeal, but that if the decree of this Court is sustained on appeal, said defendants and your Receiver will be put to the further cost and expense of an accounting for damages, the amount of which he is unable to estimate. That said defendants have made fourteen thousand eight hundred (14,800) of such shock absorbers which said defendant company has marketed for Ten dollars ($10.00) each, or a total of One Hundred forty-eight thousand dollars ($148,000.00).

That your Receiver has negotiated with complainant for a settlement of said case and subject to the approval of this Court the defendants and said Receiver have agreed to dismiss said appeal, and complainant has agreed to waive all damages, or an accounting therefor, upon payment by said Receiver to said complainant of the sum of Thirty-five hundred Dollars, ($3,500.00), the estimated

amount of costs of such appeal alone, as hereinbefore stated.

That your Receiver believes that it is for the best interest of said defendant company and said Receivership estate and creditors thereof that such settlement be made.

Wherefore said Receiver prays that he may be authorized and directed to dismiss said appeal and to settle and compromise said judgment and decree by paying unto said complainant the sum of Thirty-five hundred dollars ($3,500.00) as aforesaid, upon waiver by said complainant of [fol. 296] an accounting and release of said defendants, said Receiver and said Receivership estate from any and all further damage claims and demands whatsoever.

F. W. Treadway, Receiver the Forest City Machine & Forge Company.

STATE OF OHIO,
County of Cuyahoga, ss:

F. W. Treadway being first duly sworn says that he is the duly appointed, qualified and acting Receiver of The Forest City Machine & Forge Company, and that the statements of the foregoing application are true as he verily believes.

F. W. Treadway.

Sworn to before me and subscribed in my presence this 29th day of September, 1924. R. G. Morrison, Notary Public. (Seal.)

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Application of receiver to compromise, etc., filed in the above entitled cause in said Court, and that the same is correctly copied from the original now on file in my office.

Witness my official signature, and the seal of said Court at Cleveland, in said District, this 22 day of September, A. [fol. 297] D. 1924 and in the 149th year of the Independence of the United States of America.

B. C. Miller, Clerk, by C. A. Wilder.

Filed in Clerk's Office, Sep. 29, 1924.

Plaintiff's Exhibit No. 25

In Equity. No. 228

The Temco Electric Motor Company, Plaintiff,

vs.

Leroy A. Westman and The Forest City Electric Company, Defendants

Transcript of Docket Entries

March 28, 1914.—Bill of Complaint filed.

March 28, 1914.—Subpœna in Equity issued. Return day April 17, 1914.

March 30, 1914.—Subpœna returned and filed. (Mar. fees $4.24 #6675.) Indorsed, The United States of America, Northern District of Ohio S. S. U. S. Marshal's Return. Received this writ at Cleveland, Ohio, March 28, 1914, and on the same day at the same place I served the within named The Forest City Electric Company by delivering to W. B. Cleveland, President of the said The Forest City Electric Co., personally, a true and certified copy thereof with all indorsements thereon. On the same day I served such copy on the within named Leroy A. Westman, by delivering to him personally, a true and certified copy thereof with all indorsements thereon. Marshal's Fees: Service, $4.00; Travel, .24—$4.24. Chas. W. [fol. 298] Lapp, U. S. Marshal, by Al P. Kelly, Deputy.

March 31, 1914.—Copy of Bill of Complaint to Weed, Miller & Rothenberg.

April 6, 1914.—Order extending defendant's time to answer to May 1, 1914, filed and entered. B 378.

April 20, 1914.—Order extending defendant's time to answer to May 16, 1914. B 396.

May 2, 1914.—Amendment to Bill of Complaint filed by consent of deft.

May 4, 1914.—Copy of Amendment to Bill of Complaint to Weed, Miller & Rothenberg.

Aug. 18, 1914.—Answer filed.

Oct. 28, 1914.—Stipulation as to taking testimony filed.

Oct. 28, 1914.—Order approving stipulation as to testimony ent. C173.

Aug. 6, 1915.—Stipulation dropping cause from trial calendar filed.

Aug. 30, 1915.—Order dropping cause from trial calendar for 1 year filed & ent. D. 183.

Sept. 1, 1915.—Copy Order dropping cause from trial calendar to H. A. Toulmin.

Sept. 1, 1915.—Copy Order dropping cause from trial calendar to Weed, Miller & R.

Apr. 14, 1916.—Order reinstating cause to Calendar under Rule 57 filed & Ente. E 75.

Apr. 14, 1916.—Copy order reinstating cause etc. to Weed M. & R.

Apr. 14, 1916.—Application to reinstate cause on trial calendar fled.

June 10, 1916.—Affidavit of H. A. Toulmin, Jr., filed.

June 10, 1916.—Order to Issue Subpœna filed & ent. E. 142.

June 10, 1916.—Subpœna Duces Tecum issued.

[fol. 299]

June 13, 1916.—Subpœna Duces Tecum returned and filed (Mar. Fees 68c ≠6675.)

June 19, 1916.—Order to continue cause on Docket until decision of C. S. C. C. of A. in ≠290 Temco vs. K. W. Ig. Co. fil. & ent. E 152.

Dec. 14, 1917.—Telegram from H. A. Toulmin consenting to passing case filed.

Feb. 28, 1918.—Application for leave to file amended answer and brief filed.

Mch. 9, 1918.—Leave to defendant to file amended answer ent. F 286.

Apr. 15, 1918.—Amended Answer filed (copy furnished).

Apr. 16, 1918.—Application of the deft's for leave to take depositions and for the appointment of an examiner filed.
Apr. 16, 1918.—Affidavit of Helen V. Crerau filed.
Apr. 16, 1918.—Affidavit of Thomas A. Witherspoon, filed.
Apr. 16, 1918.—Affidavit of William M. Apperson filed.
Apr. 16, 1918.—Affidavit of Felix H. Petitmaire filed.
Apr. 16, 1918.—Affidavit of Harry G. Guenther filed.
Apr. 16, 1918.—Affidavit of Charles Jerabek filed.
Apr. 16, 1918.—Affidavit of Albert E. Frerot filed.
Apr. 16, 1918.—Affidavit of Hiliron Lazzaro filed.
Apr. 16, 1918.—Affidavit of William L. Day filed.
Apr. 17, 1918.—Affidavit of Arthur E. Merkel filed.
Apr. 24, 1918.—Affidavit of Moseley A. Keller filed.
Apr. 24, 1918.—Filing præcipe & issuing 1 Subpœna on behalf of plaintiff.
Apr. 27, 1918.—Order to take depositions before notary public instead of apptg. examiner filed & ent. F332. Costs for swearing and recording witnesses for pltf. on motion.
May 7, 1918.—Subpœna for pltf.'s witness returned & filed (Mar. Fees $3.04 #6675).

[fol. 300]

May 27, 1918.—Notice to take depositions filed.
May 27, 1918.—Depositions of Harry G. Guenther et al. on behalf of deft. (No fees taxed.) (Notice to Atty's.)
Sept. 16, 1918.—Depositions of Jas. B. Wetherell et al. on behalf of pltf. filed. (Fees pd. $18.00.) (Notice to Atty's.)
Sept. 26, 1918.—Deposition of Captain Emile La Fevere filed on behalf of pltf. (Fees pd. $39.75.) (Notice to Atty's.)
Sept. 26, 1918.—Deposition of Harry C. Bancroft, on behalf of pltf. filed. (Fees pd. $20.00.) (Notice to Atty's.)
Oct. 16, 1918.—Deposition of Clifford E. Hood et al. on behalf of pltf. filed. (Fees of $21.50.) (Notice to Atty's.)
Oct. 31, 1918.—Appl. of Deft's for limitation of pltfs. time for taking depositions filed.

Oct. 31, 1918.—Order setting time for hearing application and granting restraining order filed and ent. 9-67.

Nov. 4, 1918.—Order extending time to complete the taking of depositions filed & ent. G-69.

Nov. 12, 1918.—Deposition of I. P. Hummon et al. on behalf of plaintiff filed. (Fees pd. $13.00.) (Notice to Atty's.)

Dec. 2, 1918.—Deposition of Ralph P. Thompson on behalf of complainant filed. (Fees pd. $32.50.) (Notice to Atty's.)

Dec. 3, 1918.—Affidavit of Esta A. Smith filed with stipulation.

Feb. 10, 1919.—Application for leave to file amendment to amended answer for leave to take depositions and for continuance filed.

Feb. 10, 1919.—Affidavit of A. A. Merkel, filed.

Feb. 10, 1919.—Affidavit of A. L. Franz, filed.

[fol. 301]

Feb. 10, 1919.—Application for leave to amend etc. overruled without prejudice; exceptions ent. 9/152.

Feb. 11, 1919.—Copy of Order overruling application for leave to amend, etc., to Toulmin & T.

Feb. 13, 1919.—Renewal application for leave to file amendment to amend answer for leave to take depositions and for continuance filed.

Feb. 13, 1919.—Notice of Hearing filed.

Feb. 13, 1919.—Amendment to Answer filed.

Feb. 13, 1919.—Memorandum filed.

Feb. 13, 1919.—Affidavit of Mae L. Scofield filed.

Feb. 13, 1919.—Supplemental Affidavit of A. L. Franz filed.
Franz check stubs filed.
Franz check Apr. 9, 1912, filed.
Franz Initial Receipt Mar. 21, 1911, filed.
Franz Receipt in full Apr. 1, 1911, filed.
Meinhard Receipt Apr. 11, 1912, filed.
Merkel Sketch filed.

Feb. 13, 1919.—Defendants Exhibit A—J. M. Shock Absorber Catalogue filed.

A. A. Sales Order Book filed.

B. Jacquet Patent filed.

B. B. filed.

C. J. M. Circular filed.

D. filed.

D. D. filed.

E. J. M. Circular filed.

F. Statements of Henry S. Jacobs & Co. filed. (Bills for cards 1, 2, 3, 4 & 5.)

G. Third J. M. Catalogue.

H. Pencil Sketch filed.

I. Pencil Sketch filed.

J. Circular filed.

[fol. 302]

K. Statement of Opera Garage Co. filed.

L. Pencil Sketch filed.

M. File Wrapper and contents filed.

Defendant's Exhibit N. Die Forged Ford Bracket filed.

O-1. Statement of J. E. Rhoado & Sons filed.

O-2. Statement J. M. April 1, 1912, filed.

O-3. Statement of Samuel Cook & Co. filed.

O-4. Statement of J. Jacquet-Maurel filed.

O-5. Statement of Ford & Kending Co. filed.

O-6. Statement of Bridgeman Bros. Co. filed.

O-7. Statement of The Eynon Evans Mfg. Co. filed.

O-8. Statement of John F. Lynch filed.

O-9. Statement of John F. Lynch filed.

O-10. Statement of John F. Lynch filed.

O-11. Statement of John F. Lynch filed.

O-12. Receipt of J. M. Shock Absorber Co. filed.

O-13. Receipt of J. M. Shock Absorber Co. filed.

Feb. 13, 1919.— O-14. Ack. of Order of Richmond Forgings Corp. filed.
O-15. Letters filed.
P-1. Letter Witherspoon to J. M. Shock Absorber Co. 11-6-13 filed.
P-2. Letter Witherspoon to Petitmaire 1-19-16 filed.
Q. Second Sheet Petitmaire Patent Drawings filed.
R-1. J. M. Shock Absorber Co., newspaper Advertising 1912, filed.
R-2. J. M. Shock Absorber Co. Magazine Advertising 1912, filed.
R-3. J. M. Shock Absorber Co. newspaper Advertising 1912, filed.

[fol. 303]

R-4. J. M. Shock Absorber Co., Magazine Advertising 1912, filed.
R-5. J. M. Shock Absorber Co. Newspaper Advertising 1912, filed.
S. Filed Newspaper Advertising.
S-1. Filed Magazine Advertising.
S-2-3. Filed Newspaper & Magazine Advertising.
S-4. Filed Magazine Advertising.
T. Filed J. M. Shock Absorber Catalogue.
U. Filed Correspondence.
V. Filed Sketch.
W. Filed ——.
X-1-2. Filed Statement of Pomerantz & Co. and cancelled check.
Y-1. Cancelled Check Cehster Steel Cash Co.
2. Statement of Chester Steel Cash Co.
3. Cancelled Check Chester Steel Cash Co.
4. Statement of Chester Steel Cash Co.
Z-1-2-3. Filed Shipping notices.
Frerot Sketch filed.

Feb. 13, 1919.— Second Frerot Sketch—First Ford Brackets filed.
Frerot Sketch—3 filed.
Frerot Sketch—4 filed
Frerot Sketch—5 filed.
Guenther Check filed.
Guenther Sketch filed.
First Jerabek Sketch filed.
Second Jerabek Sketch filed.
Third Jerabek Sketch filed.

Feb. 13, 1919.—Defendant's Exhibit Fourth Jerabek Sketch filed.
Defendant's Exhibit Fifth Jerabek Sketch filed.

[fol. 304]

Defendant's Exhibit Barrel Rear Temco Absorber filed.
Defendant's Exhibit Temco Absorber filed.
Defendant's Exhibit Cutaway Rear Temco Absorber filed.
Defendant's Exhibit Additional Model A J. M. Shock Absorber filed.
Defendant's Exhibit A Type J. M. Shock Absorber filed.
Defendant's Exhibit B Type J. M. Shock Absorber filed.
C. C. Photograph Read End Franz car filed.

Feb. 15, 1919.—Subpœna for plaintiff's witness issued on præcipe filed.

Feb. 17, 1919.—Motion for leave to amend answer and for continuance overruled ent. G-159.

Feb. 17, 1919.—Final hearing continued ent. G-159.

Feb. 18, 1919.—Subpœna for pltf's witness ret'd & filed (Mar. Fees .56 #6675.)

Feb. 18, 1919.—Final hearing continued ent. G-160. Costs on Trial.

Feb. 18, 1919.—Plaintiff Exhibit petition for leave to file Sup. petitions, etc., filed.

Feb. 18, 1919.—Plaintiff's Exhibit certified copy of Petitmaire patent filed.

Feb. 18, 1919.—Plaintiff's Exhibit No. 2 (ad) filed.

Feb. 18, 1919.—Plaintiff's Exhibit Shock Absorber identified by Williams filed.
Patent in Suit filed.
Stipulation (letter dated June 3, 1916) filed.
Cert. copy injunction Holliday case filed.
Instruction sheets of Plaintiff's & deft. filed.

[fol. 305] Certified copy of order in Holliday case filed.
Colored drawing of patent in suit filed.
Record of K. W. Ing Co. case in C. C. of A. filed.
Drawing Defts. attachment K. W. I. Co. filed.
Drawing Defts. attachment Holliday case filed.
Certified copy entry of dismissal Holliday case filed.
Drawing Defts. attachment Forest City Co. filed.
Compromise agreement Temco—H. Co. filed.
Defendant's Device filed.
No. 10 Synopsis of ads., etc., filed.
No. 14 Photograph.
No. 15 Thompson-Koeb Spring Patent filed.
No. 17 Order, etc., filed.
No. 19 Time slips, etc., filed.
No. 20 Photo filed.
No. 21 Bill for Photograph filed.
No. 22 Orders to Chase et al filed.
No. 23 Orders to Gibson filed.
No. 24 Orders to Natl's Co. filed.
No. 25 Order to Toledo, etc., filed.
No. 26 Order to Reliance Co. filed.
No. 27 Orders to Gray Co. filed.
No. 28 Photograph filed.
No. 29 Absorbers Sales.

Correspondence Filed

Feb. 18, 1919.—Plaintiff's exhibit 30 Absorbers Sales Record filed.

[fol. 306] Plaintiff's Exhibit 1A Cap't Nefevres Sketch filed.
1B Cap't Nefevres Cut filed.
1C Sketch filed.
5 Sheet French Type Absorbers filed.
6 Original French Types filed.
7 J. M. Co. circular filed:
8 J. M. Ford Booklet filed.
9 Motor ad June 1914 filed.
Bancroft Forging Bill filed.
18-A Original Thompson Ab. etc. filed.
18-B Original Thompson Ab. etc. filed.
H. C. Bancroft forging filed.
Cert. copy Cert. of Incorporations, etc., filed.
Photograph of Deft. Exhibit N filed.
Negative of Photo taken of Deft. Ex. N filed.

Feb. 18, 1919.—Defendant Exhibit U. S. Letters Patent 50,886 filed.
209,247 filed.
284,206 filed.
331,669 filed.
761,353 filed.
1083,969 filed.
1083,970 filed.
French patent 405,549 filed.
French patent 430,135 filed.
U. S. Letters Patent 203,863.
330,023.
446,172.
807,612.
979,694.
1015,682.
1031,612.

[fol. 307] Pomerantz bills filed.
O. O. Blue print filed.
P. P. Blue print filed.

Q. Q. Blue Print filed.
R. R. Blue Print filed.
P-3. Letter W. W. & Co. to J. M. S. A. Co. filed.
P. 4. Letter Witherspoon to J. M. S. A. Co. filed.
J. J. (Bracket) filed.
I. I. Shock Absorber filed.
M. M. Deft. Device with weak spring filed.
K. K. Original Ford Bracket filed.
N. N. Deft. device with cutaway barrel filed.
C. Type J. M. Shock Absorber filed.

Feb. 19, 1919.—Final hearing concluded: taken under advisement ent G-161.

Feb. 19, 1919.—Deft's. Exhibit W. S. Thompson Sketch No. 1 filed.
A. S. Thompson Sketch No. 2 filed.
Ralph P. Thompson Sketch No. 1 filed.
Ralph P. Thompson Sketch No. 2 filed.
Fifth Type Radius Link Temco S. A. Sketch filed.

Mar. 17, 1919.—Depositions of Felix H. Petitmaire et al filed (No fees taxes) on behalf of deft.

Apr. 7, 1919.—Brief for plaintiff filed.

Apr. 7, 1919.—Brief for defendant filed.

Apr. 14, 1919.—Record of Defendant filed.

July 18, 1919.—Memorandum Opinion filed.

July 18, 1919.—Copy of Memo Opinion to Toulmin & Toulmin.

July 18, 1919.—Copy of Memo Opinion to Frease, Merkel [fol. 308] & Saywell.

Sept. 8, 1919.—Decree appointing B. C. Miller, Special Master, filed and enterer G-308.

Sept. 9, 1919.—Certified copy decree to B. C. Miller, Special Master.

Sept. 15, 1919.—Writ of Injunction issued.

Sept. 16, 1919.—Marshal's Return on Writ of Injunction ret'd & filed. (Mar. Fees 4.42 #6675.)

Sept. 20, 1919.—Petition for appeal filed.

Sept. 20, 1919.—Assignment of Errors filed.

Sept. 20, 1919.—Order allowing appeal filed & ent. G-319.

Sept. 20, 1919.—Bond on appeal approved and filed (U. S. F. & G. Co. $500.00.)

Sept. 20, 1919.—Citation issued Returnable October 20, 1919.

Sept. 20, 1919.—Order extending time for filing præcipe to Nov. 20, 1919, and transcript to Dec. 20, 1919, filed & ent. G-319.

Nov. 8, 1919.—Order extending time for filing præcipe to Jan. 1, 1920, and transcript to Feb. 1, 1920, filed & ent. G-358.

Dec. 23, 1919.—Order extending time for filing præcipe to Feb. 1, 1920, and transcript to Mar. 1, 1920, filed & ent. G-400.

Jan. 29, 1920.—Order extending time for filing præcipe to Mar. 1, 1920, and transcript to April 1, 1920, filed & ent. 12/.

Feb. 27, 1920.—Order extending time for filing præcipe to Apr. 1, 1920, and transcript to May 1, 1920, filed & ent. 1&/.

Mar. 25, 1919.—Order extending time for filing præcipe to May 1, 1920, and transcript to June 1, 1920, filed & ent. 1&/.

Apr. 14, 1920.—Order approving narrative Form of Testimony filed.

Apr. 14, 1920.—Defendant's Præcipe for forwarding original Exhibits filed.
[fol. 309]

Apr. 14, 1920.—Defendant's Præcipe for transcript filed.

Apr. 27, 1920.—Order withdrawing Exhibits filed & ent. H. shipwork.

Apr. 28, 1919.—Printer's receipt for papers filed.

May 4, 1920.—Stipulation In Re Certification of Record filed.

May 27, 1920.—Order extending time to file transcript to July 1, 1920, filed & ent. H/.

June 30, 1920.—Order extending time to file transcript to Sept. 1, 1920, filed & ent. H/.

Aug. 31, 1920.—Order extending time to file transcript to Oct. 15, 1920, filed & ent H/.

Oct. 9, 1920.—Agreed Statement filed.

Oct. 9, 1920.—Order approving Agreed Statement ent. H/.

Oct. 9, 1920.—Motion to dismiss appeal filed.

Oct. 9, 1920.—Order dismissing defendant's appeal filed & ent. H/. Copies for printer 18 fols. @ 10c.
Dec. 11, 1920.—Order allowing B. C. Miller compensation in sum of $25.00 filed & ent. H/.
Dec. 11, 1920.—Plaintiff's Cost Bill filed.
Jan. 25, 1921.—Filing cost bill.
Mch. 13, 1924.—Order allowing withdrawal of defts. physical Exhibits filed & ent. (Misc. 25c.)

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Transcript of Docket Entries filed in the above entitled cause in said Court, and that the same is correctly copied from the original now on [fol. 310] file in my office.

Witness my official signature, and the seal of said Court at Cleveland, in said District, this 9 day of September, A. D. 1924, and the 149 year of the Independence of the United States of America.

B. C. Miller, Clerk

Filed in Clerk's Office, Sep. 29, 1924.

PLAINTIFF'S EXHIBIT No. 28

THE UNITED STATES OF AMERICA,
Northern District of Ohio,
Western Division, ss:

At a stated term of the District Court of the United States, within and for the Western Division of the Northern District of Ohio, begun and held at the City of Toledo, in said District, on the last Tuesday in October, being the 26th day of said month, in the year of our Lord one thousand nine hundred and Fifteen, and of the Independence of the United States of America, the one hundred and Fortieth to wit: on Monday, the 10 day of April, A. D. 1916—Present: Honorable John M. Killits, United States District

Judge—among the proceedings then and there had were the following, to-wit:

[fol. 311] In the United States District Court, Northern District of Ohio, Western Division

No. 96. Equity

The Temco Electric Motor Company

vs.

The L. P. Halladay Company, Ralph R. Browne, and G. M. Browse, Doing Business as The Browne Supply Company

This cause having this day come on for trial, the parties having been duly brought before the Court, on the pleadings filed herein and the proof adduced by complainant through witnesses examined in the presence of the Court; and it appearing to the Court that The L. P. Halladay Company assumed and managed the defense of this cause for all parties defendant; and that the Court having duly considered the case; it is now ordered, adjudged and decreed as follows:

(1) That Letters Patent No. 1,072,791, to Ralph P. Thompson and W. S. Thompson, for Improvements in a Spring Suspension for Automobiles, dated Sept. 9th, 1913, are good and valid.

(2) That the entire right, title and interest in and to said invention and said Letters Patent is vested in the complainant.

(3) That said patent is infringed by the defendants.

(4) That the complainant shall have an accounting for profits and damages and that an injunction issue as prayed for in the bill.

[fol. 312] (5) That this cause is hereby referred to J. W. Wilson, Special Master, to take, state and report to the Court an account of the profits of defendants and the damages suffered by complainant as prayed in and by the bill, by reason of said infringement.

(6) That, it further apearing to the Court from the proof that Messrs. Parker & Carter had acted as counsel for defendants under employment by The L. P. Halladay Company, and had attempted to withdraw from the case after it was set for trial without leave of Court duly had and obtained, it is adjudged and decreed that they are still counsel of record for defendants.

(7) That the Clerk of this Court tax costs of this action in favor of Complainant.

John M. Killits, United States District Judge.

UNITED STATES OF AMERICA,
Northern District of Ohio,
Western Division:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify that I have compared the within and foregoing transcript with the original decree entered upon the Journal of the proceedings of said Court in the therein entitled cause, at the term, and on the day therein named, and do further certify that the same is a true, full, and complete transcript and copy thereof.

Witness my official signature and the seal of said Court at Toledo, in said District, this 25th day of March, A. D. [fol. 313] 1924, and the 148th year of the Independence of the United States of America.

B. C. Miller, Clerk. Brandon Schnorf, Deputy Clerk.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

PLAINTIFF'S EXHIBIT No. 29

THE UNITED STATES OF AMERICA,
Northern District of Ohio,
Western Division:

The President of the United States of America to the L. P. Halladay Company, Ralph R. Brown, and G. M. Brown, doing business as the Brown Supply Company, Greeting:

Whereas, The Temco Electric Company, citizen of the State of Ohio has filed on the Chancery side of the District Court of the United States, within and for the Northern District of Ohio, a bill against The L. P. Halladay Company, Ralph R. Brown and G. M. Brown, doing business as The Brown Supply Company, and has obtained an allowance of an injunction, as prayed for in said Bill from Honorable John M. Killits, one of the Judges of said Court now, therefore, we having regard to the matters in said Bill contained do hereby command and strictly enjoin you, the said The L. P. Halladay Company, Ralph R. Brown and G. M. Brown, doing business as The Brown [fol. 314] Supply Company, and each of you, your clerks, agents, workmen and attorneys, and each and every one of them, from making, using and selling, or from causing to be made, used or sold, any spring Suspension Devices containing or employing the invention, or any part thereof, embraced in and covered by United States Letters Patent No. 1,072,791; and from continuing to simulate complainant's said Spring Suspension Devices and from continuing to plagarize Complainant's trade printed matter.

Which commands and injunctions you are respectfully to observe and obey, until our said District Court shall further order in the premises.

Hereof fail not, under penalty of the law thence ensuing.

Witness, the Honorable John M. Killits, Judge of said Court at Toledo, Ohio, this 11th day of April, A. D. 1916, and in the 140th year of independence of the United States of America.

B. C. Miller, Clerk, by J. W. Wilson, Deputy Clerk.
(Seal.)

Indorsements: Marshal's No. 6751. No. 96. United States District Court Northern District of Ohio, Western Division. In Chancery. The Temco Electric Company, vs. The L. P. Halladay Co., et al. Injunction. Filed April 18, 1916, at — o'clock — M. B. C. Miller, Clerk. U. S. District Court, N. D. O. Toulmin and Toulmin, Comp'ts Sol'r.

[fol. 315] U. S. Marshal's Return

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

Received this writ at Toledo, Ohio, April 11th, 1916, and on the same day at the same place I served it on the within named The L. P. Halladay Company by delivering to Ralph R. Brown chief agent for this district personally a true and certified copy hereof with all indorsements thereon, and on the same day at the same place I served it on the within named Ralph R. Brown as an individual by delivering to him personally a true and certified copy hereof with all indorsements thereon, and on the same day at the same place I served it on the within named G. M. Brown as an individual by leaving at her usual place of residence with Ralph R. Brown an adult member of her household personally a true and certified copy hereof with all indorsements thereon.

Chas. W. Lapp, U. S. Marshal, by A. J. Larkin, Deputy.

Marshal's Fees:

Service	$6 00
Travel	24
	6 24

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Injunction Order filed [fol. 316] in the above-entitled cause in said Court, and

that the same is correctly copied from the original now on file in my office.

Witness, my official signature, and the seal of said Court at Toledo, in said District, this 25th day of March, A. D. 1924, and the 148th year of the Independence of the United States of America.

B. C. Miller, Clerk. Brandon Schnorf, Deputy Clerk. (Seal.)

Filed in Clerk's Office Sept. 29, 1924.

Plaintiff's Exhibit No. 30

In the District Court of the United States, Northern District of Ohio, Western Division

In Equity. No. 344

The Temco Electric Company, Plaintiff,

vs.

The Apco Manufacturing Company, Defendant

Transcript of Testimony and Proceedings in Above-entitled Cause Before the Honorable D. C. Westenhaver, Judge of said Court.

December 3, 1923.

Appearances:

H. A. Toulmin, Esq., and H. A. Toulmin, Jr., Esq., on behalf of plaintiff.

No one appearing on behalf of the defendant.

[fol. 317] Colloquy Between Court and Counsel

The Court: Now, in this case, as I understand it, an answer has been filed making, I suppose, the usual defense.

Mr. Toulmin, Jr.: Yes, Your Honor.

The Court: I will want the record to show that the defendant does not appear at this hearing either in person or by counsel, and that that showing should be carried into

the decree that is to be entered. You have not been advised that the answer is withdrawn, and therefore it is necessary for you to exhibit to the Court, in short form, your prima facie case.

Mr. Toulmin, Jr.: Yes, Your Honor, we can do it in about fifteen or twenty minutes, I think.

The Court: All right; proceed.

Mr. Toulmin, Jr.: If the Court please, this is a patent case in which a patent is involved with which Your Honor is familiar, having passed upon it once before. The case is a suit of The Temco Electric Motor Company, the owner of the patent on a Ford shock absorber, against The Pennsylvania Rubber & Supply Company, an Ohio corporation, which is the distributor for a shock absorber known as the Apco. The Apco is a very extensively manufactured shock absorber, and distributed throughout the United States.

[fol. 318] The Court: Who were the defendants in the case?

Mr. Toulmin, Jr.: Originally in this case, Your Honor?

The Court: Yes.

Mr. Toulmin, Jr.: The Pennsylvania Rubber & Supply Company, a distributor here in Toledo.

The Court: It was the defendant? It is on my calendar against the Apco Company.

Mr. Toulmin, Jr.: Yes, Your Honor, we joined them.

The Court: They never appeared, did they?

Mr. Toulmin, Jr.: They appeared, but were dismissed on the ground that we proved no infringement and had no agency in the district. That was a preliminary matter before Judge Killits.

The Court: They were the manufacturer of the article, were they?

Mr. Toulmin, Jr.: Yes, Your Honor.

[fol. 319] The Court: And they just sold to the Pennsylvania Rubber Company?

Mr. Toulmin, Jr.: Yes.

The Court: So that the Apco Company was not doing business itself in the district?

Mr. Toulmin, Jr.: And Judge Killits dismissed it. That is not a matter of importance to us now.

This shock absorber, if Your Honor please, in order to shorten the case as much as possible for you, is exactly the same shock absorber in organization of parts, in arrangement, etc., which Your Honor already has passed upon in the Forest City case and in the K-W Ignition Company case. The only difference in the K-W form and the form Your Honor passed upon is in the removal of the casing. This has no casing, and our Court of Appeals has already decided that the removal of the casing is of no moment; it has no function. That was the question raised and discussed in the Court of Appeals.

To come back to the patent for a moment, Your Honor will recall just briefly that it is a patent for a Ford shock absorber in which the shocks are first imparted to a coil spring, this snake-like arrangement here, and then transmitted to this, and then by a combination of the parts, we get the result. This patent, if Your Honor please, has not only been before you in the Forest City case, but was in the K-W case, and in the case of the Halliday Company, another infringement.

[fol. 320] In this particular case we applied for a preliminary injunction, and secured it without opposition, and that injunction is now running, so that we are in the position of having sale of these devices stopped now until it can be permanently done, as we hope, as the result of this action. With this brief explanation I don't know as it is necessary to burden you further, you are already so familiar with the general subject matter.

The Court: Oh yes. Is the infringement admitted?

Mr. Toulmin, Jr.: No, it is not admitted.

The Court: Well, do they admit that they sell the infringing article?

Mr. Toulmin, Jr.: I am not sure, sir, but we can prove sale before the bill, so that can be taken care of. I have witnesses here.

The Court: I presume the issuing of your patent, and that the copy attached to the bill——

Mr. Toulmin, Jr.: I will offer, Your Honor, certified copies. I desire to offer in evidence certified copy of the patent in suit, to be known as Plaintiff's Exhibit No. 1, and a certified copy of certificate showing joint title of this

plaintiff, to be known as Exhibit No. 2. These are the pre-
[fol. 321] liminary exhibits which were used on the preliminary injunction.

The Court: Very well.

Thereupon T. C. Edwards, being called as a witness in behalf of plaintiff and being first duly sworn, testified as follows:

Direct examination.

By Mr. Toulman:

Q. Will you please state your name.

A. T. C. Edwards.

Q. And where do you live?

A. Leipsic, Ohio.

Q. Will you state whether or not you are familiar with Ford shock absorbers?

A. Yes, sir.

Q. Have you ever purchased any Ford shock absorber?

A. Yes, sir.

Q. Did you ever purchase any shock absorber of this character, which I now hand you?

A. Yes, sir.

Q. What shock absorber is it?

A. Apco.

Q. When did you purchase it, if you recall?

A. We purchased that in Toledo in the first part of November; November 6th, I believe.

Q. Possibly this will refresh your memory.

A. Yes, sir. This is a receipted invoice I obtained at the time I bought and paid for it.

[fol. 322] The Court: And that date is what?

Mr. Toulmin: This date is November 6, 1922, and the bill was filed on November 16, 1922.

The Court: And from whom did he buy it?

Q. And you purchased this from The Pennsylvania Rubber & Supply Company?

A. Yes, sir.

Q. Whose name appears on this invoice?
A. Yes, sir.
Q. And is marked "Paid" at the bottom?
A. Yes.

Mr. Toulmin: The shock absorber referred to by the witness and identified by him is offered in evidence as "Plaintiff's Exhibit 3, Apco Shock Absorber sold by The Pennsylvania Rubber & Supply Company." The invoice identified by the witness as having been delivered to him by The Pennsylvania Rubber & Supply Company is offered in evidence as "Plaintiff's Exhibit No. 4, Invoice for Sale of Apco Shock Absorber by Pennsylvania Rubber & Supply Company of November 6, 1922."

[fol. 323] Thereupon the plaintiff, further to maintain the issues upon its part, called as a witness in its behalf O. P. Edwards, who, being first duly sworn, testified as follows:

Direct examination.

By Mr. Toulmin, Jr.:

Q. Your name, please?
A. O. P. Edwards.
Q. And your residence?
A. Leipsic, Ohio.
Q. What connection have you with the plaintiff company?
A. President and general manager of it.
Q. Will you state, Mr. Edwards, very briefly what has been the total production of shock absorbers made in accordance with the Thompson patent, both of yourself and the K-W Ignition Company.
A. Approximately 134,000 sets.
Q. And what generally, in amount of money, would that mean that the public has paid for these shock absorbers?
A. About two and a quarter million dollars, approximately.
Q. Are you familiar with the shock absorber known as the Apco shock absorber?
A. I am.

Q. You are familiar with the circulars put out by that company, are you?

A. I am.

Q. Will you please state what this is.

A. That is an advertisement of that company for the shock absorber.

[fol. 324] Mr. Toulmin, Jr: This circular is offered in evidence as "Plaintiff's Exhibit No. 5, Apco Shock Absorber Advertisement."

Q. Will you please state, Mr. Edwards, whether or not the shock absorbers manufactured by The Temco Company have been marked with the number and date of the patent in suit?

A. They have, yes, sir.

Q. Will you please state how long they have been so marked?

A. Since the patent was issued.

Q. Will you please state whether or not this is a Temco shock absorber?

A. Yes, sir; this is a Temco shock absorber.

Q. And what is this shock absorber I hand you?

A. This is a Temco shock absorber.

Q. One shock absorber has a case and the other hasn't a case?

A. Yes, sir.

Q. And both have been sold extensively?

A. Yes, sir.

Mr. Toulmin, Jr.: The shock absorbers identified by the witness are offered in evidence, respectively, as "Plaintiff's Exhibits Nos. 6 and 7, Temco Shock Absorbers, with the Name Plante and Notice Thereon."

[fol. 325] Thereupon the plaintiff, further to maintain the issues upon its part, called as a witness in its behalf JAMES T. NEWTON, who, being first duly sworn, testified as follows:

Direct examination.

By Mr. Toulmin, Jr.:

Q. Will you please state your name?

A. James T. Newton.

Q. What is your address, Mr. Newton?

A. Sixty years. Washington, D. C.

Q. What is your occupation, Mr. Newton?

A. Patent attorney.

Q. Will you please state what experience you have had in connection with matters of patents.

A. Why, I have been in the Patent Office for thirty years as an examiner and assistant examiner, and on the Board of Examiners in Chief, and then I was promoted to assistant commissioner, and finally Commissioner of Patents. I resigned as Commissioner of Patents about five years ago.

Q. Have you had any practical experience in the observation and operation of shock absorbers?

A. Since coming into this case I have had, and have ridden and tested them.

Q. I hand you a copy of the patent in suit, and will ask you to state if you have read it, and whether you believe you understand it.

A. I have read the patent, and I understand it.

Q. I hand you an Apco shock absorber which is marked in this case as "Plaintiff's Exhibit No. 3," and will ask you if you have ever examined that shock absorber?

A. I have, and I understand the operation of it.

[fol. 326] Q. Will you please explain very briefly, if His Honor will permit us, what you understand the structure to be disclosed in the patent in suit?

A. The patent discloses an automobile, and the particular one disclosed is a Ford automobile; the figs. 2 and 3 of the patent disclose details of construction of this invention. That is to say, disclosed an axle and extending upwardly from that axle is what is called a pin or slide, and around that pin or slide is a coil spring. There is on top of the coil spring what is called in the patent a hanger, and that construction is attached to a Ford automobile between what is known as the leaf spring, lettered "a" in the patent, and the axle. The effect of this construction is that it is a unitary construction that may be attached or taken off from an already existing automobile, without much change of the parts. Your Honor in a prior suit on this patent has very tersely and accurately expressed what is really the essential element of the invention, and that is the rigid parts whereby the side-sway of the automobile is prevented;

together with quick-acting spring between leaf spring and the automobile, and then this being capable of being off as a unit and inserted as a unit on the automobile having pre-existing parts, without the changing of those parts. That, in brief, is the description of it.

Q. And will your briefly describe the Apco shock absorber?

A. The Apco shock absorber also is attached to a Ford automobile, and has extended from a pin upwardly, and on top or surrounding that pin, or surrounding a part there which is called a hanger, there is a coil spring between the leaf spring and the axle. This coil spring is what is called in the patent a quick acting spring, and generally takes up all the shock of the automobile, and if there is any trans- [fol. 327] mitted to the leaf spring, it is taken up by the leaf spring and the operation of that shock absorber, the Apco shock absorber, is practically identical with that of the patent. There are some minor details different, for instance, in the patented device there is a casing around the coil spring, whereas in the Apco construction there is no casing, but the Court has held that that casing might be left off without materially changing the operation of the parts, since that casing only has the function ordinarily of keeping out the dust and dirt. The device operates just the same without the casing as it does with it.

The Court: The claims of the Thompson patent do not include the casing as a limiting element?

The Witness: They do not include the casing as a limiting element.

The Court: I think that is sufficient for my information. You may complete your record.

Q. Well, now, will you look at this chart here and state what it is, and state it very briefly, so we can just identify it.

A. This chart is a representation, not only of the complainant's device, shown in the patent, but is also an illustration of all of the devices that have been involved in the different suits. Fig. 1, for example, is an illustration of the construction of the Halliday device, and that was held by Judge Clarke, and also by the Court of Appeals, as being an infringement of the patent. That device, of course, has

the casing on it, and has some of the minor differences, but they held that the differences were immaterial; the con- [fol. 328] struction and operation and results of that device are the same as that of the patent.

Q. Now, Mr. Newton, to shorten the testimony, that is true of all of these devices, I presume, until you get down to the one here which is the present defendant's device?

A. That is the Apco device. I may state to the Court that I have examined these devices, and I find those figures correctly represent what was involved in those suits, and it is practically a reproduction of those devices, so you will have it right on this sheet, what the Court has held to be infringements, and that is a correct showing. The end device is the Apco device, which consists of an up-standing pin, a coil spring, a leaf spring, and a coil spring between the leaf spring and the axle, and the result and organization and construction of that device is practically the same as these other devices that have been held to infringe the patent, and also practically the same as the device shown in the patent.

Q. Mere minor mechanical manufacturing details?

A. Minor mechanical details, which do not change the operation of the device or the result that is obtained.

Mr. Toulmin: This chart, if Your Honor please, we would like to offer in evidence as "Plaintiff's Exhibit No. 8, Chart of Various Form of Shock Absorbers." And we would also like to offer in evidence this diagram or part of Apco device as "Plaintiff's Exhibit No. 9."

The Court: I was going to ask you if the defendant, The Pennsylvania Rubber Company's activities were large enough to justify an accounting?

[fol. 329] Mr. Toulmin: Well, Your Honor, we don't know. We think they were quite extensive.

The Court: All right, then you may prepare the decree in the manner indicated, and ask for an accounting.

Mr. Toulmin, Jr.: Yes, we have a decree here. We would like the record to show, as we have been informed, that the clerk has informed the defendant.

The Court: Well, my understanding is that this calendar was made up practically about the 7th of November, the

day after election, and notice sent to all of the counsel for the defendant, and the clerk advises me that in addition thereto they have yesterday and today communicated with counsel.

The Clerk: We telephoned to Judge Day this morning, and he said he would get into communication with Mr. Keller, Mr. Owens represented Mr. Keller here.

The Court: And Mr. Owen reported to us that Mr. Keller advised him that he hadn't any intention of appearing to interpose a defense.

Mr. Toulmin, Cr.: The decree we are submitting was taken from your decree in the Forest City case with the necessary verbal changes.

[fol. 330] CLERK'S CERTIFICATE

THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Transcript of Testimony and Proceedings; taken before Honorable D. C. Westenhaver, U. S. District Judge filed in the above entitled cause in said Court, and that the same is correctly copied from the original now on file in my office.

Witness, my official signature, and the seal of said Court at Toledo, in said District, this 19th day of September, A. D. 1924, and in the 149th year of the Independence of the United States of America.

B. C. Miller, Clerk, by Frances Dean, Deputy Clerk.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

Plaintiff's Exhibit No. 31

The United States of America,
Northern District of Ohio,
Eastern Division, ss:

At a stated term of the District Court of the United States, within and for the Eastern Division of the Northern District of Ohio, begun and held at the City of Cleveland, in said District, on the first Tuesday in April being the 1st day of said month, in the year of our Lord one thousand nine hundred nineteen, and of the Independence [fol. 331] of the United States of America, the one hundred and forty-fourth, to-wit; on Monday, the 8th day of September, A. D. 1919.

Present: Honorable D. C. Westenhaver, United States District Judge.

Among the proceedings then and there had were the following, to-wit:

No. 228. Equity

The Temco Electric Motor Company

vs.

The Forest City Electric Company and Le Roy A. Westman

This cause having come on to be tried in open Court, on depositions previously taken by leave of Court and on the testimony of witnesses adduced at the trial, and the same having been duly tried, fully argued and briefed by counsel for both parties, and later considered by the Court and on opinion filed herein on July 18th, 1919, it is now ordered, adjudged and decreed as follows:

(1) That the allegations of the plaintiff's bill are proved by the evidence and are hereby sustained by the Court; that the defenses set up and relied on are hereby overruled and held to be ineffective; that the application to amend the answer to bring in the Buffalo use, is denied and all the testimony with respect thereto is rejected; but the Court further is of the opinion that no different conclusion is required even if said testimony is received and considered.

(2) That the letters patent to Thompson & Thompson, No. 1,072,791, issued September 9th, 1913, relating to improve- [fol. 332] ments in shock absorbers or spring suspension for Automobiles, are good and valid.

(3) That plaintiff's title to said letters patent is also good and valid.

(4) That the shock absorbers manufactured, used and sold by the defendants jointly and severally, and generally known as the E-Z Rider are an infringement of said letters patent and of all the claims thereof.

(5) That an injunction, in accordance with the prayers of the bill herein, be forthwith issued and served on the defendants, and each of them, perpetually enjoining and restraining them, and each of them, from hereafter making, using or selling said infringement shock absorbers, or parts thereof, or any other shock absorbers, or parts thereof, in infringement of said letters patent.

(6) That the plaintiff shall have an accounting for profits and damages from the defendants, and each of them.

(7) That this cause be, and is hereby, referred to a Special Master to take, state and report to this Court an account of the gains, profits and advantages that have been derived by the defendants, and each of them, and of the damages suffered by the plaintiff, by reason of the manufacture, use and sale of said E-Z Rider shock absorbers, and parts thereof, and any other shock absorber, and parts thereof, in infringement of said letters patent; that the Master shall inquire and report to the Court the extent of the infringement and the nature of the participation of [fol. 333] each of said defendants; that the Master shall inquire and report as to whether or not the conduct of the defendants was willful, deliberate and wanton; and that by reason of his special fitness and experience in such accountings, and the further fact that he is not connected with either party or their counsel, by blood or marriage, B. C. Miller, of Cleveland, Ohio, is hereby appointed such Special Master, and clothed with the usual powers belonging thereto; and he is hereby directed to proceed with all reasonable speed in carrying out the purposes of this reference.

(8) That plaintiff recover from defendants its costs herein to be taxed.

THE UNITED STATES OF AMERICA,
Northern District of Ohio,
Eastern Division:

I, B. C. Miller, Clerk of the District Court of the United States, within and for said District, do hereby certify that I have compared the within and foregoing transcript with the original Opinion entered upon the Journal of the proceedings of said Court in the therein entitled cause, at the term, and on the day therein named; and do further certify that the same is a true, full and complete transcript and copy thereof.

Witness, my official signature, and the seal of said Court at Cleveland, in said District, this 12 day of September, A. D. 1919, and the 144th year of the Independence of the United States of America.

B. C. Miller, Clerk, by Anna Elliott, Deputy Clerk.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

[fol. 334] PLAINTIFF'S EXHIBIT No. 32

UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF OHIO,
EASTERN DIVISION

No. 281. In Equity

THE TEMCO ELECTRIC MOTOR CO.

vs.

THE I. J. COOPER RUBBER CO.

Decree

This cause coming before the Court upon the plaintiff's bill of complaint, a preliminary injunction having been granted heretofore herein, and the defendant now acquiesing

in the rights of the plaintiff as set forth in its bill of complaint, it is now ordered, adjudged and decreed as follows:

(1) That the letters patent to Thompson & Thompson, No. 1,072,791 issued September 9th, 1913, relating to improvements in shock absorbers or spring suspension devises for automobiles, are good and valid.

(2) That the plaintiff's title to said letters patent is also good and valid.

(3) That the shock absorber known as the Apco shock absorbers, manufactured by the Apco Manufacturing Company, of Providence, Rhode Island, and sold by defendant herein, are an infringement of said letters patent and all claims thereof.

(4) That a permanent injunction, in accordance with the prayers of the bill of complaint herein, be forthwith issued and served on the defendant, perpetually enjoining and re- [fol. 335] straining defendant, its clerks, agents, workmen and attorneys, from hereafter making, using or selling said infringing shock absorbers, or parts thereof, or any shock absorbers or parts thereof in infringement of said letters patent; and from simulating plaintiff's spring suspension devices and from plagiarizing plaintiff's trade printed matter.

(5) That no accounting be awarded herein because defendant has settled in full with plaintiff, which settlement plaintiff has accepted in full, for all claims of plaintiff against defendant for profits and damages by reason of defendant's infringement of said Thompson & Thompson patent No. 1,072,791.

(6) That the plaintiff also recover from defendant its costs herein to be taxed.

J. E. Sater, United States Judge.

Approved as to form: Toulmin & Toulmin, Counsel for Plaintiff. O. E. Davis, Counsel for Defendant.

Filed May 8, 1924. B. E. Dilley, Clerk.

THE UNITED STATES OF AMERICA,
Southern District of Ohio,
Eastern Division, ss:

I, B. E. Dilley, Clerk of the District Court of the United States, within and for the District and Division aforesaid, do hereby certify that the foregoing is a correct copy of the original Decree, filed May 8, 1924, as the same appears on file and of record in the Clerk's Office of said Court, in the therein entitled cause.

[fol. 336] In witness whereof, I have hereunto set my hand and affixed the seal of said Court at the City of Columbus, Ohio, this 8th day of September, 1924.

B. E. Dilley, Clerk, by G. C. Cropper, Deputy.
(Seal.)

Filed in Clerk's Office Sep. 29, 1924.

DEFENDANT'S EXHIBIT 17-A

H. A. Toulmin, H. A. Toulmin, Jr., Schwind Building, Dayton, Ohio

C. H. Kesler, F. W. Schaefer, McGill Building, Washington, D. C.

Patent Law Offices, Toulmin & Toulmin

Dayton, Ohio, Mar. 1st, 1916.

Mr. William Storrie, 37 Caroline Ave., Providence, R. I.

DEAR MR. STORRIE: I have to advise you that the U. S. District Court for the Northern District of Ohio, sitting at Cleveland, has just handed down an opinion by his Honor, Judge Clarke, in which he sustains the Thompson patent No. 1,072,791, dated Sept. 9th, 1913, for Shock Absorbers, owned by The Temco Electric Motor Co., Leipsic, Ohio. The Court not only finds the patent good and valid, but also finds that The K-W Ignition Co. and Joseph A. Williams, the defendants, have infringed the patent. You are [fol. 337] familiar with the device or absorber manufac-

tured by that Company, which you will recall is constructed and operated in substantially the same manner as the shock absorber you have been manufacturing and selling. The Temco Electric Motor Co. wishes me to call your attention to your infringement of this patent, and to say that they shall have to proceed against you in an infringement action for an injunction for the recovery of profits and damages. But I have suggested to them that you may be willing to make a settlement for past infringement, and to take a license under this patent, rather than to be sued. Therefore, before instituting an action, I am writing this letter with a view to giving you this opportunity. If you are willing to embrace it, you better write and make an appointment to come here for a conference with our client, whom we think will be willing to meet you in this office, provided your response is prompt. This patent having been sustained, The Temco Electric Motor Co. has the right to a preliminary injunction against you without the delay of going through a trial. This is particularly so in your case because of the substantial identity between your shock absorber and that which the Court has held to be an infringement.

And then there is another matter that might be adjusted, namely, the radius link interference controversy in the Patent Office. The radius link feature is a mere detail which the defendants in the above suit, and which you yourself, have been using in connection with the absorber which is an infringement of the Thompson patent. This you will appreciate. Nevertheless, this minor controversy before the Patent Office might be adjusted so that all matters would be removed from legal disputes and be placed upon a business basis.

[fol. 338] I await your prompt reply so that I shall know whether to institute the infringement action or not.

I enclose you a copy of Judge Clerk's opinion.

Yours very truly, H. A. Toulmin, Jr.

Dict.

District Court of the United States, Northern District of Georgia, Northern Division. In equity. No. 271. Temco Electric Motor Company, Plaintiff, vs. Apco Manufacturing Company, defendant. Defendant's Exhibit No. 17 A. Chauncey E. Wheeler, Notary Public. (Notarial Seal.)

DEFENDANT'S EXHIBIT 17-B

H. A. Toulmin, H. A. Toulmin, Jr., Schwind Building, Dayton, Ohio

C. H. Kesler, F. W. Schaefer, McGill Building, Washington, D. C.

Patent Law Offices, Toulmin & Toulmin

Dayton, Ohio, March 7th, 1916.

Mr. William Storrie, 37 Caroline Ave., Providence, R. I.

DEAR MR. STORRIE: I have your favor of the 1st inst.

The decision sustaining the validity of the Thompson patent was by the United States District Court. The K-W Ignition Co. can appeal and doubtless will.
[fol. 339] But that is neither here nor there, in the present matter.

If the K-W Ignition Co. appeals and the patent is sustained, as it doubtless will be, then The Temco Electric Motor Co. will not be disposed to settle the matter with you in nearly so generous a fashion.

The Temco Company has directed us to proceed at once against you unless some settlement can be made. Consequently, if you do not come forward at once and make some equitable arrangement in adjustment of the question we shall be forced to sue some infringer who is selling your absorber in this territory, and where the suit would be less expensive to the Temco Company than to go way off to New England.

We would regret very much to have to do this, but we are under instructions to take prompt action.

Unless we hear from you at once with a view to settlement, we shall be forced to bring suit.

Let us have an early reply from you and settle the matter in a way that will be least expensive and troublesome to all parties.

Very truly yours, H. A. Toulmin, Jr.

Dict.

District Court of the United States, Northern District of Georgia, Northern Division. In Equity. No. 271. Temco Electric Motor Company, Plaintiff, vs. Apco Manufacturing Company, Defendant. Defendant's Exhibit No. 17 B. Chauncey E. Wheeler, Notary Public. (Notarial Seal.)

[fol. 340] DEFENDANT'S EXHIBIT 17-C

37 Carolina Ave.,
Providence, R. I., Mar. 4, 1916.

H. A. Toulmin, Jr., Dayton, O.

DEAR MR. TOULMIN: Your communication to me of March 1st received last evening was as you may assume somewhat in the nature of a surprise and I have been sitting on one of my absorbers since to help reduce the shock.

The matter I agree is of much importance to the Temco Electric Motor Co. and myself and your suggestion to make some settlement on the various issues on this patent interference seems reasonable and business like.

I suppose if the K. W. Ignition Co. decide to further protest the decision just rendered this fact would halt any mutual agreements indefinitely and as yours is the first and only communication to me regarding the matter I am in the dark as to any further movements in the case.

Would you kindly inform me if the present decision is final or if the K. W. Ignition Co. can put any further stay in the proceedings.

Altho I would like to renew our acquaintance, maybe on a different attitude this time, and also Mr. Thompson, you may know that as the amount of business done by me at present is mostly dependent on my own efforts it would be an inconvenience to get to Dayton at this time.

If it is practical at all in the meantime any concession in the way of correspondence would be appreciated.

Thanking you for your interest and awaiting your reply

Very truly yours, ——— ———.

[fol. 341] In the District Court of the United States, Northern District of Georgia, Northern Division. In Equity. No. 271. Temco Electric Motor Company, Plain-

tiff, vs. Apco Manufacturing Company, Defendant. Defendant's Exhibit 17-C. Chauncey E. Wheeler, Notary Public. (Notarial Seal.)

DEFENDANT'S EXHIBIT 17-D

37 Carolina Ave.,
Providence, R. I., March 10, 1916.

H. A. Toulmin, Jr., Toulmin & Toulmin, Dayton, O.

DEAR MR. TOULMIN: Responding to your favor of March 7th, with relation to the supposed infringement of the Thompson patent, I would say that I note your great haste in attempting to force some recognition of the validity of the above patent from me, before an appeal can be had from a decision of the District Court. If that decision is so strong that you believe it would prevail upon appeal, it looks peculiar to me that you should show such extreme haste to enforce your supposed rights.

I am a stranger to the claims of the Thompson patent, and have never seen, so far as I can recollect, a copy of the same, so I have no knowledge further than your opinion as to what the patent covers. I certainly would not enter into any negotiations unless or until I had familiarized myself with the Thompson patent claims and submitted it to competent counsel to instruct me what this patent covers. It is my intention to visit an attorney in the near future and have him look up this patent and find out what you are claiming and request him to supply me with the [fol. 342] data. Such a report I understand involves considerable time. If the exigencies of your case are so pressing, or if you are afraid of any unfavorable decision on my part I can do nothing to prevent you taking the course you propose. If, on the other hand, you are seriously inclined to learn whether or not I will consider your proposal, you will await such time as I can take up the matter intelligently.

Very truly yours, ——— ———.

In the District Court of the United States, Northern District of Georgia, Northern Division. In Equity. No. 271. Temco Electric Motor Company, Plaintiff, vs. Apco

Manufacturing Company, Defendant. Defendant's Exhibit No. 17-D. Chauncey E. Wheeler, Notary Public. (Notarial Seal.)

IN UNITED STATES DISTRICT COURT

[Title omitted]

PETITION FOR APPEAL—Filed November 17, 1924

Honorable Samuel H. Sibley, United States Judge.

Sir: The above named defendant, Apco Manufacturing Company, feeling itself aggrieved by that portion of the decree made and entered in this cause on the 31st day of October, 1924, whereby the Court adjudged and decreed that claims 1, 2 and 4 of Letters Patent of the United States [fol. 343] No. 1,072,791, issued September 9, 1913, being Letters Patent sued on herein, were valid and that the defendant had infringed upon the same and had infringed upon the rights of the plaintiff herein, thereunder, now comes by its solicitors and counsel and does hereby appeal from said part of the decree to the Circuit Court of Appeals for the Fifth Circuit for the reasons specified in the assignments of error, which are filed herewith, and it prays that its appeal be allowed, as provided by law, and that a transcript of the record containing the testimony, exhibits, stipulations and all proceedings herein, duly authenticated, may be sent to the United States Circuit Court of Appeals for the Fifth Circuit, and petitioner further shows that, desiring to supersede the execution of the said part of the decree, it presents herewith its bond for the benefit of the plaintiff in the sum of Ten Thousand Dollars ($10,000.00) and its appeal bond in the sum of Five Hundred Dollars ($500.00) with good and sufficient sureties, which the Court is respectfully asked to approve and prays that thereupon all further proceedings in the Court be suspended and stayed until the determination of said appeal in the United States Circuit Court of Appeals for the Fifth Circuit.

Respectfully submitted.

Apco Manufacturing Company, Moseley Arthur Keller, Clifford L. Anderson, J. A. Branch, Counsel. Anderson, Rountree & Crenshaw, Branch & Howard, Solicitors for Defendants.

[fol. 344] Filed in Clerk's Office 4:20 P. M. Nov'r 17, 1924.

The foregoing petition for Appeal granted and the appeal is allowed.

In open Court this 17 November, 1924.

Sam'l H. Sibley, United States Judge.

In United States District Court

Assignments of Error—Filed November 17, 1924

Now comes the Apco Manufacturing Company, defendant herein, and makes the following assignment of errors in connection with its petition for appeal:

First. The Court erred in finding that Letters Pateit No. 1,072,791 to Ralph P. Thompson and W. F. Thompson for improvements for spring suspensions for automobiles, dated September 9, 1913, are good and valid as to Claims 1, 2 and 4 thereof.

Second. The Court erred in holding that the defendant has infringed said Claims 1, 2 and 4 of said Letters Patent.

Third. The Court erred in not decreeing, in accordance with its independent judgment expressed in the opinion rendered by the Court, that defendant did not infringe Claims 1, 2 and 4 of said Letters Patent.

[fols. 345-347] Fourth. The Court erred in ordering an accounting for profits and damages to be had against the defendant as to Claims 1, 2 and 4 of said Letters Patent.

Fifth. The Court erred in ordering that complainant recover of the defendant its costs to be taxed.

Sixth. The Court erred in not dismissing the bill of complaint.

Wherefore, the defendant prays that the said decree of the United States District Court for the Northern District of Georgia, Northern Division, insofar as said decree decrees against this defendant, be reversed, and that the Court be directed to enter a decree dismissing the bill of

complaint and that the defendant recover from plaintiff its cost of appeal and all other costs in this Court and in the Court of Appeals and that defendant may be given such other and further relief as may be just and proper.

Moseley Arthur Keller, Clifford L. Anderson, J. A. Branch, Solicitors and Counsel for Defendant.

Bond on appeal for 10,000, approved and filed November 17, 1924, omitted in printing.

[fols. 348-354] Bond on appeal for $500.00, approved and filed November 17, 1924, omitted in printing.

[fol. 355] In United States District Court

Præcipe for Transcript of Record—Filed December 8, 1924

To the Clerk:

Please prepare a transcript of record for the Circuit Court of Appeals in the above entitled cause, and include therein the following papers and orders:

1. Bill of Complaint.
2. Answer.
3. Narrative statement of the evidence, with approval of the Court indicated thereon.
4. All exhibits introduced in evidence on behalf of plaintiff, including exhibits attached to affidavits and forming part of papers on motion for preliminary injunction and exhibits introduced during the taking of depositions and the trial in open Court, with the exception of plaintiff's exhibit No. 14, being the bound record of the case of the Temco Electric Motor Company against the K-W Ignition Company and J. A. Williams, said record to be regarded as a physical exhibit.
5. All exhibits introduced in evidence on behalf of defendant, including exhibits attached to the affidavits and forming part of papers on motion for preliminary injunction

[fol. 356] and exhibits introduced during the taking of depositions and the trial in open Court, with the exception of defendant's exhibit No. 16, being the bound copy of record of the interference proceedings between Ralph P. Thompson and William Storrie, said record to be regarded as a physical exhibit.

6. Include in the above exhibits of both defendant and plaintiff:

a. Thompson patent in suit, 1,072,791.

b. Storrie patent 1,279,035, defendant's exhibit 3.

c. Bussing patent, defendant's exhibit 12.

d. Bussing patent, defendant's exhibit 14.

e. Cosset patent, defendant's exhibit 13.

f. Peurgeot patent, defendant's exhibit 15.

g. The drawings and illustrations comprising defendant's exhibits 1 to 6 inclusive.

h. Defendant's exhibit 7, Storrie—Thompson interference papers.

i. Defendant's exhibits 8 and 9, Court of Appeals decisions.

j. Defendant's exhibits 10 and 11, and A and B.

k. Defendant's exhibits 17 and 18, page 5 only of defendant's exhibit 19, and front cover of defendant's exhibit 20, [fol. 357] exhibits 19 and 20 to be otherwise regarded as physical exhibits and not otherwise reproduced unless desired by plaintiff; defendant's exhibit 22.

l. Defendant's exhibit 21 complete; defendant's exhibits 39, 40, 41, 42, 43, 44 and those portions of exhibits 45 and 46 which refer to shock absorbers of Edwards Brothers Company.

m. Plaintiff's exhibits 1, 3, 4, 5, 8, (6 if desired by plaintiff); also if desired by plaintiff exhibit 9; exhibit 10, 11 and 12.

n. Plaintiff's exhibit 15 with exception of Bussing patent which is duplicate of defendant's exhibit 14; exhibits 16, 17 and 18.

o. Plaintiff's exhibit 21, Storrie file wrapper, also plaintiff's exhibits 22, 23, 24, 25, 26, 29, 30, 31, 32 and 33.

7. Opinion of Court on motion for preliminary injunction.

8. Order denying preliminary injunction.

9. Decree.

10. Petition for appeal.

11. Assignment of errors.
12. Order allowing appeal.
13. Bond for $10,000.
[fol. 358] 14. Bond on appeal.
15. Citation.
16. Order extending time to file transcript.
16½. Order of Dec. 8, 1924, further extending time to perfect Appeal and file Transcript.
17. Præcipe for transcript.
18. Certificate of clerk.

Respectfully, Clifford L. Anderson, James A. Branch, M. Arthur Keller, Attys. for Apco Mfg. Co.

Due and legal service of the foregoing Præcipe acknowledged this December 8th, 1924.

Toulmin & Toulmin, Troutman & Troutman, Spalding, MacDougald & Sibley, Attorneys for Temco Electric Motor Company.

[fol. 359] In United States District Court

Plaintiff's Præcipe for Transcript on Defendant's Appeal—Filed December 15, 1924

To the clerk:

Please include in the transcript of record on defendant's appeal the following exhibits omitted by defendant from its præcipe:

Plaintiff's Exhibits Nos.:

13. Chart applying two claims of patent in suit to Apco absorber.
15. Bussing French patent 374,364 of 1907.
19. Temco-Florian correspondence, 12 sheets.
20. Temco testimony letters, 27 sheets.
34. Temco correspondence from users.
35. Photograph produced by Craig.
36. Photograph produced by Craig.
37. Photograph produced by Craig.
38. Photograph produced by Craig.
39. Photograph produced by Craig.

40. Photograph produced by Craig.
41. Photograph produced by Craig.
42. Photograph produced by Craig.
28. ——.

[fol. 360] Also plaintiff's Exhibits 6 and 9 which defendant states in its præcipe will be reproduced and included in the Court of Appeals record if plaintiff so desires. Plaintiff also desires included in the Court of Appeals record all other exhibits of plaintiff referred to in defendant's præcipe, with the exception of Plaintiff's Exhibit No. 14, Court of Appeals record in Temco, vs. K. W.

The following exhibits of Plaintiff will be sent to the Clerk of the Court of Appeals as physical exhibits:

Plaintiff's Exhibits Nos.:

2. Apco shock absorber.
14. 6th C. C. A. record in Temco vs. K. W.
19. Present embodiment of Temco absorbers.
20X. Present embodiment of Temco absorber.
21X. Sample of K. W. infringing absorber.
22X. Sample of Temco absorber as originally made.
43. Negative produced by Craig.
44. Negative produced by Craig.
27. ——.

The Clerk is also requested to include in the record for the Court of Appeals the following:

Affidavit of J. T. Newton, executed in March, 1924, before a Notary Public in Fulton County, Georgia.

[fol. 361] Affidavit of O. P. Edwards, executed in March, 1924, before a Notary Public in Fulton County, Georgia.

The Clerk is requested to send to the Clerk of the Court of Appeals the exhibits treated as physical exhibits above.

Toulmin & Toulmin, Troutman & Troutman, Spalding, MacDougald & Sibley, Counsel for Plaintiff.

Service of the foregoing præcipe and a copy thereof acknowledged this 15 day of December, 1924.

M. A. Keller, Anderson, Rountree & Crenshaw, Branch & Howard, Counsel for Defendant.

IN UNITED STATES DISTRICT COURT

[Title omitted]

NOTICE OF LODGMENT OF STATEMENT OF EVIDENCE—Filed December 20, 1924

To Temco Electric Motor Company or its counsel:

Please take notice that we have this day lodged with the Clerk of the District Court of the United States for the [fol. 362] Northern District of Georgia a statement of the evidence in said case in narrative form for examination by you, and that on the 20th day of December, 1924, at 10:00 o'clock A. M. we wil- ask the Court or Judge to approve the statement. This statement having been prepared, and this notice being given in compliance with Equity Rule No. 75.

This December 8, 1924.

Anderson, Rountree & Crenshaw, Branch & Howard, M. Arthur Keller, Attorneys for Apco Manufacturing Co. Clifford L. Anderson, John A. Branch, Counsel.

Due service of the above notice is acknowledged this December 8th, 1924.

Toulmin & Toulmin, Troutman & Troutman, Spalding, MacDougald & Sibley, Attorneys for Temco Electric Motor Co.

[fol. 363] Clerk's certificate to foregoing transcript omitted in printing.

Citation omitted from the printed record, the original thereof being on file in the office of the Clerk of the U. S. Circuit Court of Appeals.

* * * * * * *

[fol. 364] IN UNITED STATES DISTRICT COURT

[Title omitted]

PETITION FOR CROSS-APPEAL—Filed November 19, 1924

The above named plaintiff, The Temco Electric Motor Company, feeling itself aggrieved by a part of the decree entered herein on or about October 31st, 1924, hereby appeals from said decree as to said part to the United States Circuit Court of Appeals for the Fifth Circuit, for the reasons specified in the assignment of errors, which is filed herewith; and it prays that this cross-appeal may be allowed and that citation issue as approved by law; and that a transcript of so much of the record, proceedings and papers herein, duly authenticated, as specified in the plaintiff's praecipe, may be sent to the United States Circuit Court of Appeals for the Fifth Circuit.

Toulmin & Toulmin, Spaulding, MacDougald & Sibley, Troutman & Troutman, Counsel for plaintiff.

[fol. 365] IN UNITED STATES DISTRICT COURT

ASSIGNMENTS OF ERROR ON CROSS-APPEAL—Filed November 19, 1924

Now comes The Temco Electric Motor Company, the above-named plaintiff, by its solicitors, and having prayed for a cross-appeal to the United States Circuit Court of Appeals for the Fifth Circuit from a part of the decree entered in this cause by the District Court on or about October 31st, 1924, and says that said part of said decree is erroneous and against the just rights of said plaintiff for the following reasons:

(1) That the District Court erred in its holding that its independent judgment was that claim 3 of the Thompson patent is incomplete and void.

(2) That the District Court erred in not holding as its independent judgment that claim 3 of the Thompson patent was valid and infringed.

(3) That the District Court erred in its decree as to claim 3 of the patent in suit in not following the rule of stare decisis and accepting the judgments of the United States District Courts for the Northern District of Ohio, and the like judgment of the United States Circuit Court of Appeals for the Sixth Circuit in the several cases of this plaintiff against others, as shown by the record herein.

(4) That the District Court erred in not holding, as its independent judgment, that all of the claims of the patent in suit were infringed by defendant.

[fols. 366 & 367] Wherefore plaintiff prays that said decree be modified accordingly.

Toulmin & Toulmin, Spaulding, MacDougald & Sibley, Troutman & Troutman, Counsel for Plaintiff.

In United States District Court

Order Allowing Cross-appeal—Filed November 19, 1924

Plaintiff's cross-appeal this day filed is hereby allowed and the appeal cost bond is fixed in the sum of Two Hundred and Fifty Dollars. This 18th day of November, 1924.

Sam'l H. Sibley, United States Judge.

Bond on cross-appeal for $250.00, approved and filed November 22, 1924, omitted in printing.

[fol. 368] In United States District Court

Praecipe for Transcript of Record—Filed November 19, 1924

To the Clerk:

Please prepare a transcript of record for the Circuit Court of Appeals in the above entitled cause, including therein the following:

1. Plaintiff's petition for cross-appeal.
2. Plaintiff's assignment of errors.

3. Order allowing plaintiff's cross-appeal and fixing cost bond.
4. Citation.
5. Plaintiff's cross-appeal cost bond.
6. Plaintiff's præcipe.

[fol. 369] 7. Certificate of Clerk.

Toulmin & Toulmin, Spaulding, MacDougald & Sibley, Troutman & Troutman, Counsel for Plaintiff.

Service of the above præcipe and a copy thereof acknowledged this 19th day of November, 1924.

Branch & Howard, Anderson, Rountree & Crenshaw, Arthur Keller, Counsel for Defendant.

IN UNITED STATES DISTRICT COURT

[Title omitted]

STATEMENT RE CERTAIN EXHIBITS AND ORDER THEREON—Filed December 20, 1924

And now comes the Respondent and shows to the Court that in the preparation of the Transcript of the Record in the above stated case, for transmission to the Circuit Court of Appeals, to which an appeal has been entered and allowed, it has developed that there are a great many items of evidence introduced in the case which it is impracticable, [fol. 370] if not impossible, within a reasonable time, for the Clerk to reproduce so as to make copies thereof for insertion in the Transcript, such as prints appearing in advertisements, charts, photographs, printed matter in unusual type and like things which were introduced in evidence, either as Exhibits or affidavits filed or depositions taken, or were separately introduced. Also there were introduced in evidence certain models of the apparatus manufactured by the plaintiff and the apparatus manufactured by the Defendant, which of course cannot be transmitted to the Court of Appeals except physically.

The following are the exhibits or documents in evidence introduced by the plaintiff and defendant respectively which come under the description above given of those which it

it impracticable to be caused to be reproduced for transmission:

Plaintiff's Exhibits

No. 3. Being photo of advertisement "Apco Shock Absorbers for Ford Cars," also marked (Temco v. Penn Rubber, Plff. Ex. 4).

4. Photo of drawing "K-W Absorber" (Deft's Ex. 88 in K-W Rec. in C. C. A., p. 333).

4. Photo of drawing and add "K-W Absorber" in contrast with Apco Absorber (C. C. A. Rec. in K-W *stat* p. 333, 3 drawings with numerals.

6. Drawing—7 figures (From) Halladay Case; KW Ign. Case; Forest City Suit; Apco case, etc.

[fol. 371] 7. Thompson Patent No. 1,072,791, U. S. Patent Office print with illustrations.

8. Small advertising folder of Apco Mfg. Co, description and instructions for installing.

13. Chart applying two claims of patent in suit to Apco absorber.

15. Photo—Bussing patent, 3 figs. (No. 374,364).

16. Photo Lefeove patent, 4 figs. (No. 430,135).

17. Photo Pernot patent, 1 fig. (No. 371,231).

18. Photo Rimbailhos Complete Specifications, 3 figs.

20. Temco testimonial letters, 27 sheets.

21. (Part) Storrie patent No. 1,279,035 U. S. Patent Office print with illustrations.

26. Gamm & Nelson patent No. 1,116,878, U. S. Patent Office print with illustrations.

33. Printed Price List (1922) Apco Shock Absorbers with 27 illustrations of parts on back or reverse side.

34. Temco correspondence from users.

25. Photograph produced by Craig.

36. Photograph produced by Craig.

[fol. 372] 37. Photograph produced by Craig.

38. Photograph produced by Craig.

39. Photograph produced by Craig.

40. Photograph produced by Craig.

41. Photograph produced by Craig.

42. Photograph produced by Craig.

Defendant's Exhibits

No. 1. Illustration, Storrie Original Absorber, photo 2 figs.

2. Illustration, Apco Absorber, photo—2 figs.

3. Storrie patent No. 1,279,035, U. S. Patent Office Print with illustrations.

4. "Complainants Infringement Illustration Defendant's Attachment K. W. Ignition Company.

5. Same. Halladay Company.

6. Same. Forest City Company.

7. Printed record—Court of Appeals of the District of Columbia, Thompson vs. Sorrie with illustrations.

8, 9. Exhibits 8 and 9, Court of Appeals decisions.

10. Photo, advertisement "Saturday Evening Post, April 24, 1915, Temco Absorber for Ford Cars.

[fol. 373] 11. Illustrations, etc.

A. Advertising Folder "Apco 66 Shock Absorber for Ford Cars."

B. Advertising Folder Apco Equipment for Ford Cars, diagrams and Directions for Installing.

12. Bussing patent, drawings, 3 figs.

13. Cosset patent, drawing, 2 figs.

14. Nr. 191371, drawing 2 figs., also Bussing patent.

15. Peugeot patent, 418,297, Photo drawings 2 figs.

18. Drawing (No. 568) Apco Mfg. Co. (W. S.) Actual Test Rear Touring Spring.

19. Advertising Folder, Apco Shock Absorber, 8 pages and cover, "The Master Design" for Ford cars a New Era in Spring Suspension, illustrated.

20. Page advertisement Apco Shock Absorbers (1918) publication not shown.

21. Advertising Folder, large, "Four Million Ford Owners Need Apco "66."

22. Advertising Folder "Temco Shock Absorbers, illustrated.

39. Illustrated Item, Ford Dealers News, July 19, 1924, page 66.

40. Page advertisement Temco Shock Absorbers, illustrated, publication not shown.

[fol. 374] 41. Page advertisement Temco Shock Absorbers, illustrated, in The Horseless Age, April 15, 1917.

42. Page Advertisement Temco for Ford Cars, Saturday Evening Post, April 24, 1915.

43. Page advertisement Temco Shock Absorbers, Automobile Journal Oct. 1920.

44. Advertisement Temco Shock Absorbers, illustrated Horseless Age.

45. Illustrated Item, Shock Absorbers for Fords, publication not shown.

46. Illustrated Item, Edwards Shock Absorbers, publication not shown.

And those Exhibits in evidence representing metal models and the like which must be physically transmitted to the Court of Appeals are as follows:

1. The physical K-W Shock Absorber, as Plaintiff's Exhibit 21X.

2. The sample of the K-W Absorber as manufactured by the Temco Electric Motor Company and sold by the K. W. Ignition Company with outside shell, Plaintiff's Exhibit 22X.

3. The sample with shell cut away so that the interior of the Temco Shock Absorber may be observed, Plaintiff's Exhibit 20X.

[fol. 375] 4. Certified copy of pages 186, 187 and 188 of Original Transcript of the Record in the case of Temco vs. K-W Ignition Co.

5. Models of Shock Absorbers manufactured by the Defendant.

Wherefore, Appellant prays that the præcipes filed in this case, insofar as they apply to the articles hereinbefore enumerated, be disregarded and that the exhibits and evidence referred to be physically transmitted to the Court of Appeals for consideration by that Court on the appeal.

M. Arthur Keller, James A. Branch, Clifford L. Anderson, Appellant's Attys.

The foregoing petition granted the Clerk is ordered to transmit the evidence mentioned physically December 20th, 1924.

Alex C. King, U. S. Circuit Judge.

[fol. 376] Clerk's certificate to foregoing transcript on cross appeal omitted in printing.

Citation on cross-appeal omitted from the printed record, the original thereof being on file in the office of the Clerk of the U. S. Circuit Court of Appeals.

* * * * * * *

[fol. 377] Minute entry of argument and submission, October 7, 1925, omitted in printing.

[fol. 378] In United States Circuit Court of Appeals, Fifth Circuit

No. 4493

Apco Manufacturing Company, Appellant and Cross-Appellee,

versus

The Temco Electric Motor Company, Appellee and Cross-Appellant

Appeal and Cross-appeal from the District Court of the United States for the Northern District of Georgia

James A. Branch, Clifford L. Anderson, Moseley Arthur Keller for appellant and cross-appellee.

John A. Sibley, H. A. Toulmin, H. A. Toulmin, Jr. (King, Spalding, MacDougald & Sibley on the brief), for appellee and cross-appellant.

Before Walker, Bryan and Foster, Circuit Judges.

Opinion Filed January 27, 1926.

Bryan, Circuit Judge:

This is an appeal from a decree in which appellant was held to be an infringer of the Thompson patent, No. 1,072,791, issued September 9, 1913, for a shock absorber designed

to be used in combination with the leaf spring of a Ford automobile. The patent is owned by appellee, plaintiff below.

[fol. 379] The Ford car is equipped with two semi-elliptic leaf springs, one over and parallel to each axle. The ends of each spring are turned down and attached by radius links to upright stanchions bolted through the axle, and the middle portions of the springs support the body of the car. The object of the patent in suit was to make riding easier by combining the coil or helical spring with the leaf spring. Thompson, the patentee, undertook to accomplish this result by a device which would absorb shocks between the axle and the leaf spring. The shock absorber which he described and illustrated contains an upright stanchion to take the place of the stanchion to which the leaf spring is attached, and a sliding hanger extending above the leaf spring and connected with it by the link which theretofore had been directly attached to the stanchion of the car. The spring which operates the sliding member of the shock absorber was at first placed around the stanchion, but later the stanchion was placed outside the spring. Each of the claims upon which the patent was granted is for a combination of a coil spring and a hanger attached to slide on a stanchion. One of the claims, which was disallowed by the District Court, is for "stanchions being adapted to limit the end motion of the leaf springs and thereby prevent the side sway of the chassis frame;" but it, as well as the other claims, describes the hanger as having a vertical movement and being guided by the stanchion. A claim for a combination of a helical and leaf spring was rejected by the Patent Office because such combination was well known in the prior art. Of necessity the side sway of the car and the thrust of the expanded leaf spring were limited by the stanchions of the shock absorber just as theretofore they had been by the stanchions of the car, and it was soon discovered that there was considerable friction between the stationary and the moving parts of the patented device. [fol. 380] Thompson thereupon began to use a radius link on his device for the purpose of reducing *fric* and applied for a patent on a new combination which included it. But in an interference proceeding in the Patent Office priority of the conception of a radius link as a part of a shock ab-

sorber adapted to a Ford car was awarded to one Storrie, and this ruling was upheld by the Court of Appeals for the District of Columbia. Appellant secured a license from Storrie and used the radius link on its device which it is claimed infringed upon the patent in suit.

Appellant's device has a conical spring mounted on a stanchion and a rod or hanger which at its lower end is held in the center of the broad base of the spring by one end of a radius link, the other end of which fits into an eye in the stanchion on the side away from the leaf spring. The end of the radius link which holds the hanger in position is pivotally connected by a toggle arrangement with the radius link attached to the leaf spring. The rod or hanger is not a sliding member, but is held in position by the radius link of the Storrie patent.

The idea of putting the helical spring upon a hanger instead of placing it directly between the leaf spring and the axle is not new, but appears in former patents. There was no invention involved in the use of a stanchion to limit the site sway of the car and give play to the leaf spring, as is conclusively show by the fact that a stanchion was already in use on the Ford car. A hanger adapted to slide on a supporting stanchion so as to limit side sway was the only thing in the Thompson patent which was new. Everything else in the combination was known in the prior art and could not become the basis of a claim to invention. Therefore the patent in suit being for a combination of well known parts is for a narrow invention.

[fol. 381] The only question presented for decision, as it appears to us, is whether a radius link designed to control side sway is the equivalent of a sliding hanger used for the same purpose. If the means used by appellant are substantially different from those of the patent there was no infringement, because the patent, being for the combination of well known parts, is for a narrow invention. Walker on Patents (339. The rule doubtless would be different in the case of a pioneer patent where a broad range of equivalents is allowed in favor of the first inventor. In our opinion the radius link which defendant had a right to use is essentially different from the sliding hanger. In appellee's device the coil spring is held upright against the stanchion by friction, while in appellant's device the rod or hanger

is held in position, not by friction, but by the radius link, which keeps it from sliding against either the springs or the stanchion.

The able district judge was also of opinion that infringement had not been shown, but entered a decree in favor of appellee out of deference to two decisions of the Circuit Court of Appeals of the Sixth Circuit in K-W Ignition Co. v. Temco Electric Motor Co., 243 Fed. 583 and 283 Fed. 873. That was a case brought by the appellee in this case against a defendant who had been manufacturing appellee's shock absorber under a contract, and who, at the termination of the contract, manufactured a shock absorber which it was held infringed the Thompson patent of which appellee was the owner. The defendant in the cited case continued to use the same trade mark which it had used during the period covered by its contract for the avowed purpose of dividing the market with appellee. While the contract was in force appellee had begun to use the radius link on its device and the court found as a fact that the [fol. 382] defendant acquired its knowledge of the utility of the radius link from the appellee, and without knowledge of Storrie's claim. On the first appeal the claim of infringement was upheld. The second appeal dealt with an accounting of profits, and the court held that the question of priority of the right to use the radius link was not before it, but in awarding damages it recognized that the appellee was not entitled to the radius link and refused to allow damages for its use. It is therefore apparent that the radius link idea was conceded to Storrie and was not considered an equivalent of the sliding hanger of the Thompson patent. Appellant in this case does not stand in the relation of one who has been guilty of unfair competition, and its rights are to be determined solely upon the question of infringement.

Appellee has filed a cross-appeal and insists that the claim which the district court disallowed is valid. That claim is about as vague as it could be made. As pointed out by the district judge it fails to specify the means by which the leaf and helical springs could be connected to and guided by the stanchion. To sustain a claim as general as this is would be to allow a patent for a "result and not for the mechanism producing it." American Crayon Co. v. Sexton, 139 Fed. 564.

Appellee takes nothing by its cross-appeal, and the decree is reversed on the original appeal with directions for further proceedings not inconsistent with this opinion.

[fol. 383] In United States Circuit Court of Appeals

[Title omitted]

Judgment—January 27, 1926

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Georgia, and was argued by counsel;

On consideration whereof, It is now here ordered, adjudged and decreed by this Court, that the appellee, Temco Electric Motor Company, take nothing by its cross-appeal, that the decree of the said District Court in this cause, be, and the same is hereby, reversed on the original appeal, and that said cause be, and it is hereby remanded to the said District Court for further proceedings not inconsistent with the opinion of this Court;

It is further ordered, adjudged and decreed that the appellee and cross-appellant, Temco Electric Motor Company, and the surety on the cross-appeal bond herein, Aetna Casualty & Surety Company, be condemned, in solido, to pay the costs of this cause in this Court on both the original appeal and cross-appeal, for which execution may be issued out of the said District Court.

[fol. 384] In United States Circuit Court of Appeals

[Title omitted]

Order Staying Mandate—Filed February 13, 1926

It being made known that the Appellee and Cross-appellant in the above numbered and entitled cause desire to apply to the Supreme Court of the United States for the issuance of the Writ of Certiorari in said cause, it is

ordered that the mandate of this court in said cause be stayed for the period of 45 days; such mandate to issue upon the expiration of the period mentioned unless the proposed application for the writ of certiorari shall then have been submitted to the Supreme Court of the United States.

Done at New Orleans, Louisiana, this 13th day of February, A. D., 1926.

(Signed) R. W. Walker, United States Circuit Judge.

[fol. 385] In United States Circuit Court of Appeals

[From Plaintiff's Exhibit 14]

Opinion—Filed February 28, 1916

Clarke, District Judge:

It is claimed in this suit that the defendants have infringed United States Letters Patent No. 1,072,791, bearing date September 9, 1913, and issued to Ralph P. Thompson, William S. Thompson, and by them assigned to the plaintiff. The patent describes a spring suspension device or shock absorber for use on automobiles, but especially adapted for use on Ford cars. The usual accounting for profits and damages is claimed.

In addition to the claim of infringement the bill contains a further claim for damages for what amounts to unfair trade and competition. The essential facts are that on the 16th day of April, 1913, the plaintiff and the defendant, the K. W. Ignition Company, entered into a written contract by the terms of which the defendant was to be the exclusive sales agent for auxiliary springs to be manufactured by the plaintiff, in conformity with certain inventions of which it was the owner.

That contract provided that it should remain in force "until such time as it may be terminated by mutual agreement." Application for the patent in suit was pending at the time the contract was executed and the patent itself was issued in the following September. The defendant, Joseph A. Williams, during all of the times referred to in the testimony in the case was the president and guiding

spirit of the conduct of the business of the defendant company. A large and profitable business was done by the parties until by exchange of letters and otherwise in the month of April, 1914, the contract between them was terminated. Shortly before the contract was terminated differences arose between the parties which resulted in the defendant Ignition Company taking steps to devise and manu- [fol. 386] facture a shock absorber which was in form slightly and in principle of operation still less slightly if at all different, from that of the plaintiff, and this it proceeded to manufacture and put upon the market in sharp competition with that of the plaintiff.

It continued to market its product as the K. W. Road-Smoother which was the name under which the product of the plaintiff was known to the trade, and it marked it with the same trade mark as it had used when making the plaintiff's product under the contract.

The first claim to be considered is that of the plaintiff that the defendant is estopped from denying the validity of the patent in suit, for the reason that paragraph eighth of the contract of April 16, 1913, reads as follows:

"Eighth. The party of the second part hereby agrees not to manufacture or endeavor to have manufactured any of these auxiliary springs, and also agrees to respect all patent rights which now belong to or may be acquired by the party of the first part on these auxiliary springs."

It is claimed, and many authorities are cited in support of the claim, that this provision estops the defendant Ignition Company during the life of the patent sued on from contesting the validity of it. The following cases are cited in support of this contention, viz.:

Dunham vs. Bent., 72 Fed. Rep., 60.
Philadelphia Creamery S. Co. vs. Davis, etc., Co., 77 Fed., 879.
Consolidated Rubber Tire Co. vs. Finley, etc., Co., 116 Fed., 629.
American Specialty Stamping Co. vs. New England Co., 178 Fed., 106.
Burr vs. Kimbark, 28 Fed., 574.
Hurwood Mfg. Co. vs. Wood, 138 Fed., 835.

It does not seem to this Court that any of these decisions establish a rule applicable to the case at bar. Without deal-
[fol. 38,] ing with them separately, in some of them there are contracts not to contest the patents in a form which shows that they were to continue during the life of the patents involved; in some the facts are not sufficiently stated to warrant their application to the case at bar, and in others the decisions are upon applications for injunctions and they are so brief that they do not bring out either the facts or the reasons upon which the court proceed.

There is nothing in the contract between the parties which indicates that the provision that the Ignition Company shall respect the patents belonging to or afterward acquired by the plaintiff was to continue longer than the life of the contract itself, and in the absence of such specific provision, this part of the contract must fall with the rest of it.

In a contract thus written the provision for terminating the contract and so the obligation to respect the patent does not seem to this Court different in substance from the provision in the contract in Stimpson Computing Scale Co. vs. Stimpson Co., 104 Fed., 893, providing that the license might be terminated on six months' notice in writing by the licensee, and I think in the case at bar as in the Stimpson case:

"There was nothing in the contract which imposed a further disability upon either party after it should have been brought to an end by the exercise of a right reserved therein."

And I conclude that in this case again as in the Stimpson case,

"After the termination of a license, the parties are freed from any estoppel resting upon them while in their former relation. The licensee may dispute the title or right of the former licensor to the same extent as a stranger might. The estoppel is raised for the protection of the interest which the assignor or licensor professed to convey, and has no further office."

In Dueber Watch Case Mfg. Co. vs. Robbins, 75 Fed., 17, the Circuit Court of Appeals for this circuit says:

[fol. 388] "The fact that for a time the defendant was a licensee of the Colby patent cannot of course estop the defendant from disputing its validity in a suit for infringements charged to have taken place after the license was withdrawn."

The Court also cities the case of Noonan vs. Chester Park Athletic Club, 99 Fed., 90, and see Brown vs. Lapham 27 Fed., 77.

Whatever doubt there may be as to whether such an estoppel as is claimed by the plaintiff would exist against the defendant in other circuits, it seems clear enough that in this circuit the cases cited prescribe a contrary rule for our guidance in this case. This conclusion places the defendant in the same position with respect to infringement and to proof of the prior art as a stranger to the plaintiff would be and the case will considered on this basis.

Many patents, foreign and domestic, are referred to in the amended answer of the defendant, but the expert for the defendant gave it as his opinion on cross-examination that Williams patent No. 203,863 dated May 21, 1878, was the nearest approach to the device of complainant's patent. This and the Haskins patent No. 330,023 patented November 10, 1885, seem to this Court to describe the nearest approach to the plaintiff's device which has been introduced in evidence either in patents or in publications. The theory upon which the plaintiff claims that the construction described in its patent is useful and novel is that since a coil spring acts more quickly than a leaf spring, and since in the patent in suit the coil spring is interposed directly between the axle of the car and the leaf spring, the shock to the wheel on the road will be absorbed more rapidly by the quick acting coil spring than by the slow acting friction restrained leaf spring, with the result that the compression and recoil of the leaf spring is not synchronous with that of the coil spring, and that therefore the full effect of the shock to the wheel will not be transmitted to the body of the vehicle or to the persons riding in it. [fol. 389] That this is not a fanciful theory seems to be sufficiently established by the evidence, and that the defendants are not in a position to in good faith dispute it is abundantly proved by the manner in which they advertised

the construction of the patent and held it out to the public as contributing to the comfort of the riders especially in Ford cars and as contributing also to reduced wear of tires. Up to the time of trial the defendant continued to make the same claims for the shock absorber which it has manufactured and sold since the contract with the plaintiff was terminated.

While the construction of the Williams patent referred to approaches closely in many respects in form to that of the patent in suit, the second spring, or as it is now called, the shock absorber, in the Williams construction is intended to be clamped to "the longitudinal side-bars of a wagon" and also to the ends of the leaf springs Thus is the auxiliary spring not only not interposed directly between the axle of the vehicle and the leaf spring, but these more or less flexible side bars introduce a third spring element into the transmission of shock from the wheels of the vehicle to the body of the car and to the riders, and thus the arresting effect on the shock of the two important springs acting at different times, it is claimed, is lost. The Haskins patent is not in theory directed to taking up road shocks or shocks to the wheels of vehicles, but the patent shows that the inventor had in mind adjusting his combination of springs to various loads to be carried and chiefly to overcoming what he calls the "horse movement" or jolt to vehicles caused by the movements of the horses drawing them. The other patents cited are much more remote from the plaintiff's construction than these two which we have referred to and need not be considered. In view of the state of the prior art thus disclosed the chief difficulty of this Court has been to decide whether or not the combination of the well known elements which are brought together in the patent in suit produces such a new and useful result not achieved before as to involve patentable invention, or [fol. 330] whether it be only an aggregation of well known elements in which each acts to produce the same unmodified result which it had been used to produce before. Reckendorfer vs. Faber, 92 U. S., 347; Pickering vs. McCullough, 104 U. S., 310; Auto Sales Gum Co. vs. Caille Bros. Co., 224 Fed. Rep., 473.

Assuming the fact to be, as the evidence quite clearly shows is the fact, that the plaintiff's device does really

contribute to the comfort of riding in motor cars, to which it was applied, especially in Ford cars, we have in addition in this case the consideration that the device when put upon the market met with such immediate and great sales that they cannot be justly attributed to unusual advertising or other creating of a market. The sales agent for the defendant testifies that he was at Vancouver, Canada, when he was notified of the execution of the contract of April, 1913, between the plaintiff and the defendant company, and he says that on his way home he sold between three and four hundred sets of the road smoothers or shock absorbers before he had seen the article or knew the prices, and without the use of any literature or advertising. There were sold during the year of the life of the contract between 12,000 and 13,000 sets of the shock absorbers and one of the most persistent complaints of the defendants to the plaintiff during the life of the contract of April, 1913, was that the plaintiff was not supplying the shock absorbers in sufficient numbers to meet the demands of the market for them.

The patents introduced in evidence make it clear enough that, for a considerable time before the date of the Thompson invention in suit there was a very general effort among inventors to discover some means of relieving the jolting occasioned by motor cars moving at high speed over rough streets and roads, none of which served the purpose intended nearly so well as the patented device in suit, especially in the cars to which the latter are best applied. And while the construction of the patent in suit is made up of [fol. 391] well known elements, yet they are combined in a manner so different from any combination that preceded it, that the immediate adoption of it by the general public is very persuasive evidence that it possesses that novelty and merit which lift it to the level of invention. Upon the whole, though not without misgiving, I am of opinion that the combination of the patent in suit possesses a novelty and utility which entitle it to be classed among inventions, and that it is valid and should be sustained.

Coming to the question of claimed infringement upon the part of the defendant, we have the president of the defendant concluding, in the month of March, 1914, before the contract between the parties was terminated, that it was likely

to come to an end before very long, and thereupon he says he called in his draftsmen and set them to work to devise a shock absorber which his Company might put upon the market without infringing plaintiff's patent. This shock absorber manufactured by the defendant has been introduced in evidence, and it seems very clear that in organization, mode of operation and result, it is in substance the same combination as that of the plaintiff's patent, and that it therefore infringes it. The defendant avowedly started out not to patent an invention, but to invent a patent, and as is usual in such cases the result is an infringement, and not a discovery. To this it should be added that a device avowedly worked up to evade a patented article to which the persons claiming under it sustained the relation which the defendant sustained in this case to the device of the plaintiff should not be weighed in golden scales for the purpose of discovering merits to save it from being considered an infringing construction.

The "Voight Shock Absorber" proof of which was introduced under the claim of a prior use, is to this Court confirmation of the originality and value of the plaintiff's device. The Voight construction acts on a principle different from that of the plaintiff and is so unsightly that it is not to be wondered at that it has not come into general use, while the plaintiff's construction is so effective, compact [fol. 392] and cheap that, as we have pointed out, immediately after its appearance it commanded an extensive market on its merits.

As to the claim of unfair competition on the part of the defendants. The defendant Williams frankly confesses to a determination to divide the market with the plaintiff even before the contract of April 13th, 1913, was terminated and he followed up his purpose with energy and enterprise. However the right to an accounting for profits and damages, not threefold, which the decree to be entered will give to the plaintiff seems to this Court sufficient to satisfy the ends of justice. A decree will be entered in favor of the plaintiff in conformity to the conclusion of this opinion.

John H. Clarke, Judge.

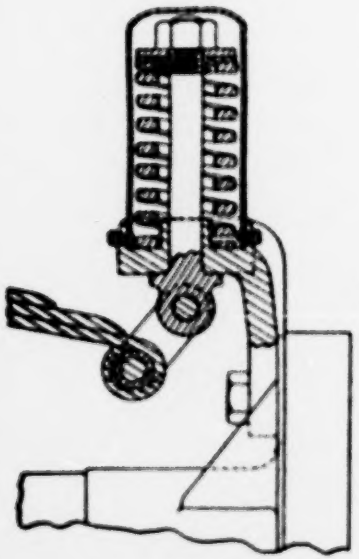
(Here follows Plaintiff's Exhibit 6, marked side folio page 393.)

IN UNITED STATES CIRCUIT COURT OF APPEALS

Plaintiff's Exhibit 6

FIG. 1

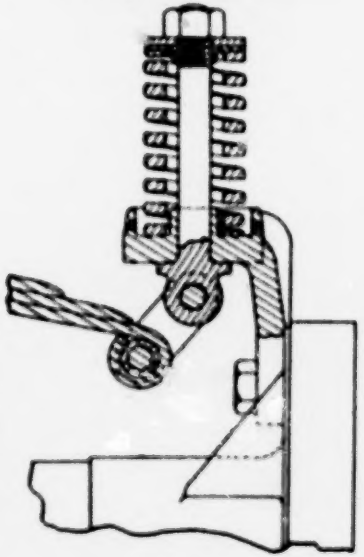
HALLADAY CONSTRUCTION-
HELD BY THIS COURT
AN INFRINGEMENT.



FROM HALLADAY
CASE.

FIG. 2

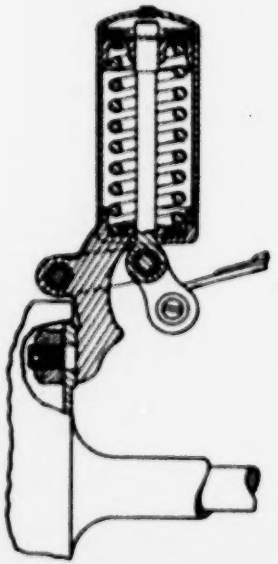
SAME AS FIG. 1 CASING
REMOVED C.C.A. 6TH
CIR. 243 FED. 590.
SAYS PRESENCE OF
CASING IMMATERIAL.



FROM HALLADAY
CASE.

FIG. 3

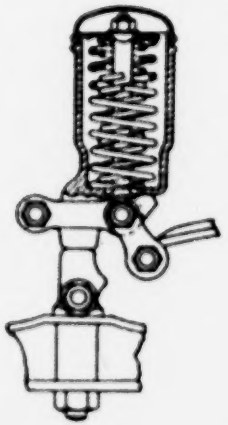
K.W. IGNITION CO.,
TYPE FOUND INFRIN-
GEMENT WITH OR WITHOUT
CASING 243 FED. 590



FROM K.W.
IGNITION CO, CASE
MAIN RECORD P. 181

FIG. 4

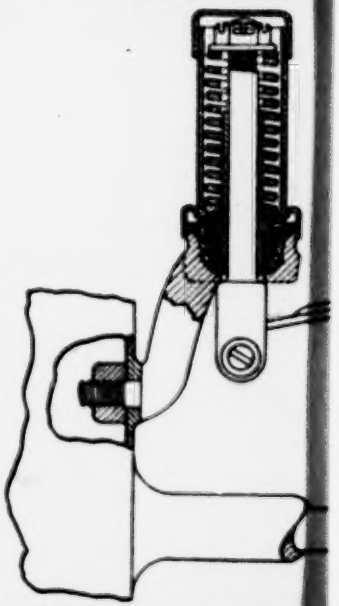
ONE OF TEMPCO., FORMS
WITHIN PATENT IN K.W.
CASE C.C.A. 243
FED. 588



FROM K.W.
IGNITION CO, CASE
MAIN RECORD P. 197

FIG. 5

COMPLAINANT'S IN
INGEMENT ILLUSTR
DEFENDANT'S ATTAC
FOREST CITY CO.



FROM FOREST CITY
HELD INFRINGED.

Plaintiff's Exhibit 6

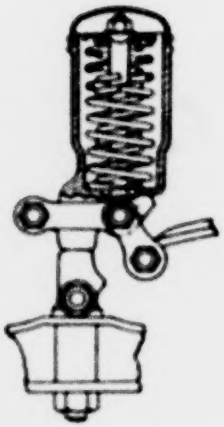
FIG. 3

K.W. IGNITION CO., TYPE FOUND INFRINGEMENT WITH OR WITHOUT CASING 243 FED. 890

FROM K.W. IGNITION CO., CASE MAIN RECORD P. 181

FIG. 4

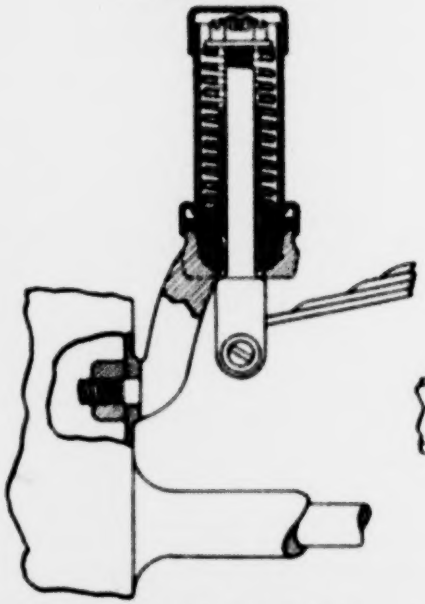
ONE OF TEMPCO, FORMS WITHIN PATENT IN K.W. CASE C.C.A. 243 FED. 588



FROM K.W. IGNITION CO, CASE MAIN RECORD P. 197

FIG. 5

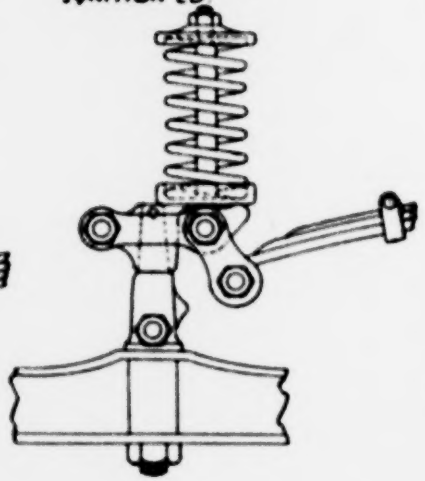
COMPLAINANT'S INFRINGEMENT ILLUSTRATION DEFENDANT'S ATTACHMENT, FOREST CITY CO.



FROM FOREST CITY SUIT- HELD INFRINGED.

FIG. 6

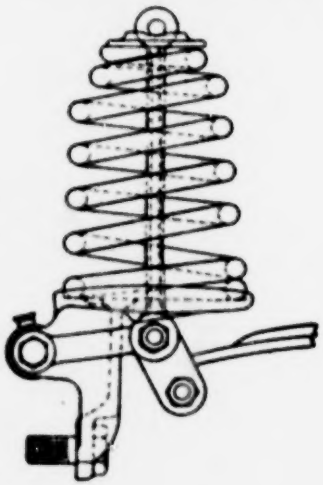
ORIGINAL THOMPSON ABSORBER WITH LINK AND WITHOUT CASING COPIED BY K.W. IGNITION CO.



FROM K.W. IGNITION CO. CASE MAIN RECORD P. 199

FIG. 7

APCO PRESENT TYPE. ADDED RADIUS LINK LIKE K.W. AND REMOVED COVER. C.C.A. 6TH CIR., HOLDS. DOES NOT AVOID INFRINGEMENT.



APCO CASE.

[fol. 394] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 395] In Supreme Court of the United States

Order Allowing Certiorari—Filed April 26, 1926

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

FILED
MAR 29 1926
WM. R. STANSBURY
CLERK

No. 1[redacted]37

In the Supreme Court of the United States

October Term, A. D. 1925

275
54

THE TEMCO ELECTRIC MOTOR CO.,
Petitioner.

—v.—

APCO MANUFACTURING CO.,
Respondent.

On Petition for Writ of Certiorari.

Certiorari Petition on Diversity of Decisions Between Two Courts of Appeals and Brief in Support of Same

H. A. TOULMIN,
H. A. TOULMIN, Jr.,
Counsel for Petitioner.

King, Spaulding, MacDougald & Sibley,
Of Counsel for Petitioner.

[redacted]

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60309

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In the Supreme Court of the United States

October Term, A. D. 1925

The Temco Electric Motor Company,
Petitioner,

—v.—

Apco Manufacturing Company,
Respondent.

Certiorari Petition by Petitioner on Diversity of Decisions Between Two Circuit Courts of Appeals

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To The Honorable The Supreme Court of the United States:

Your petitioner prays that the writ of certiorari be issued to the United States Circuit Court of Appeals for the Fifth Circuit to require said Court to certify to the Supreme Court of the United States for its review and determination the case of Apco Manufacturing Company, Appellant and Cross-Appellee, v. The Temco Electric Motor Company, Appellee and Cross-Appellant, in Equity No. 4493.

First: This petition is based on the ground of conflict between the opinions and judgments of the United States Circuit Court of Appeals for the Sixth Circuit and of several of the District Courts of that Circuit, embracing the judicial findings of

some eight Judges, commencing with a former member of this Court (Mr. Justice Clarke), and the contrary judgment and opinion (R. 260) of one District Judge for the Northern District of Georgia, and of the Court of Appeals for the Fifth Circuit. (R. 378, 383.) The exact diversity of opinion exists as to the validity of claim 3 of United States Patent No. 1,072,791 of September 9, 1913, the infringement of claims 1, 2, 3 and 4 of said patent and the scope of the claims 1, 2 and 4 of said patent, as to which the Courts in the two Circuits differed.

Second: The points as to which such conflict exists are these:

(a) That Mr. Justice Clarke (when District Judge) and the Court of Appeals for the Sixth Circuit, Judges Warrington, Knappen, Denison, Donahue and Sater (sitting in the Court of Appeals on the patent questions and the accounting) and Judges Killits and Westenhaver sitting in the District Courts, held your petitioner's shock absorber patent (the first absorber made for a Ford car) to be good and valid as to all four of its claims; and,

(b) Later your petitioner was awarded a recovery of $292,938.26 by the Circuit Court of Appeals for the Sixth Circuit;

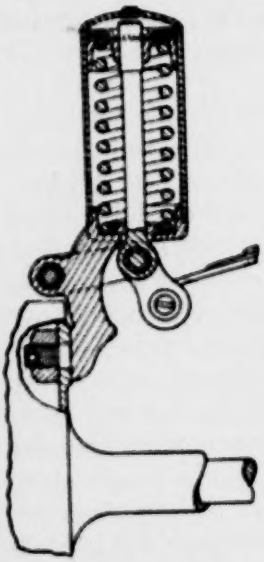
(c) That afterwards the District Court for the Northern District of Georgia held Claim 3 of said patent void.

(d) That the Circuit Court of Appeals for the Fifth Circuit held, first, that said Claim 3 was void; and secondly, that the other claims were not infringed by a structure identical with the structure held by the Court of Appeals of the Sixth Circuit to infringe those same claims and Claim 3 as well. See the illustrations here inserted:

Before Sixth Circuit

FIG. 3

K.W. IGNITION CO., TYPE FOUND INFRINGEMENT WITH OR WITHOUT CASING 243 FED. 590



FROM K.W. IGNITION CO, CASE MAIN RECORD P. 181

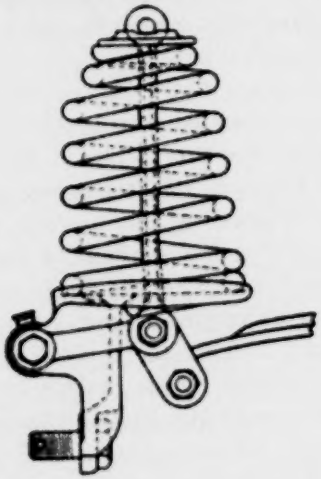
K-W Infringing Absorber (From Plaintiff's Exhibit 6)

Petitioner v. K-W Ignition Co., 243 F. 588.

Before Fifth Circuit

FIG. 7

APCO PRESENT TYPE. ADDED RADIUS LINK LIKE K. W. AND REMOVED COVER. C.C. A. 6TH CIR., HOLDS. DOES NOT AVOID INFRINGEMENT.



APCO CASE.

Apco Absorber (From Plaintiff's Exhibit 6)

Petitioner v. Apco Mfg. Co.

(e) That, moreover, Judge Westenhaver of the Northern District of Ohio, in this Petitioner v. Penn. Rubber & Supply Co., held this **same** Apco absorber to be an infringement of all the claims of this same patent, and held also that the patent was valid. This trial was in open court on issue joined on defendant's Answer setting up prior art, and denying validity and infringement; but counsel for defendant not appealing until the accounting was commenced, resulting in a money judgment for this petitioner.

Third: The Court of Appeals for the Sixth Circuit in the case of this petitioner, The Temco Electric Motor Co. v. The K-W Ignition Co., 243 Fed. 588 (June 8, 1917) has sustained the validity of all the claims in this patent and the infringement thereof and has given to the claims a scope sufficient to include shock absorbers such as held not to be an infringement of these same claims by the Court of Appeals of the Fifth Circuit, in this case now at bar. This Sixth Circuit opinion was in affirmance of Mr. Justice Clarke, then on the District Bench, who also found all four claims valid and infringed. Subsequently, the Court of Appeals of the Sixth Circuit awarded your petitioner $292,938.26 for such infringement (283 Fed. 873). Other District Courts of the Sixth Circuit in cases involving similar structures, found the patent valid in all of its claims and infringed, to-wit, Judge Westenhaver in the United States District Court for the Northern District of Ohio, Eastern Division, July 18, 1919, in The Temco Electric Motor Company v. Forest City Electric Company, in Equity No. 228 (printed copies of which are filed with the Record):

Judge Killits in the United States District Court for the Northern District of Ohio, Western Division, April 10, 1916, in The Temco Electric Motor Company v. The Halladay Company, et al; in these cases, the defendants made cash settlements.

In a suit on this patent for infringement by the **identical Apco shock absorber involved herein,** the patent was found infringed by such Apco shock absorber and found valid in the United States District Court for the Northern District of Ohio, Western Division, Judge Westenhaver, on December 23, 1923, in The Temco Electric Motor Company v. Penn. Rubber & Supply Company.

Various other defendants selling these same Apco absorbers have **acquiesced** in the infringement and validity of the patent in suit, such as in the United States District Court, for the Southern District of Ohio, Eastern Division, Judge Sater, January 22, 1924, The Temco Electric Motor Co. v. The Cooper Rubber Company; in the United States District Court for the Western District of Kentucky, Judge Moorman, December, 1925, in Temco Electric Motor Company v. The Belknap Hardware Company; and in the United States District Court for the Eastern District of Tennessee, Northern Division, Judge Hicks, in March, 1924, in The Temco Electric Motor Company v. The Tennessee Mill & Mine Supply Company. The identical shock absorber held not to be an infringement by the Court of Appeals of the Fifth Circuit was involved in these several actions in which final decrees and permanent injunctions have been entered.

Fourth: Your petitioner filed its Bill of Com-

plaint against the respondent, Apco Manufacturing Company, in the United States District Court for the Northern District of Georgia, Northern Division, for the infringement of said patent by the manufacture, use and sale of these Apco shock absorbers, such as involved in the District Courts hereinbefore mentioned and identical in all of its infringing particulars with the K-W Ignition Company shock absorber held to be an infringement by the Court of Appeals for the Sixth Circuit, and similar to the shock absorbers held to be an infringement by other District Courts in the Sixth Circuit. On the 31st day of October, 1924, said District Court for the Northern District of Georgia sustained the validity of the patent in claims 1, 2 and 4, and found an infringement thereof, following thus far the decision of the Court of Appeals for the Sixth Circuit in 243 Fed. 588, supra; but departing from the judgment of that Court of Appeals as to claim 3, and held it to be void on a question affecting the form of the claim.

Fifth: That said cause came on to be heard in the Court of Appeals for the Fifth Circuit, and upon the 27th day of January, 1926, such Court rendered a judgment holding the patent to be invalid in claim 3, because of alleged defect in its mere **form**, holding the patent to be non-infringed, and holding that claims 1, 2 and 4 were limited to the narrowest details. (R. 378, 383.)

A certified copy of the record in this case of Petitioner v. Respondent in the Court of Appeals for the Fifth Circuit is hereby furnished in conformity

to Rule 35 of this Court, and such record is hereby made a part of this Petition.

Respectfully submitted,

THE TEMCO ELECTRIC MOTOR CO.,

By H. A. Toulmin,
H. A. Toulmin, Jr.,
Counsel for Petitioner.

King, Spaulding, MacDougald & Sibley,
Of Counsel for Petitioner.

United States of America,
State of Ohio,
County of Putnam. } ss.

O. P. Edwards, being first duly sworn, states:

That he is President of the above named petitioner, The Temco Electric Motor Company, and as such President has full knowledge of its business affairs and particular knowledge of the matters and things set forth in this petition, and of the conduct and proceedings in the above entitled action; that he has read the foregoing petition and knows the contents thereof; and that the matters stated therein are true to the best of his knowledge and belief.

O. P. EDWARDS.

Subscribed and sworn to before me this 24th day of March, 1926.

R. W. WORTMAN,
(Seal) Notary Public, Putnam County, Ohio.

I certify that in my opinion the above petition is well grounded in the matter of law and proper to be heard.

H. A. TOULMIN,
H. A. TOULMIN, Jr.,
Of Counsel for Petitioner.

BRIEF IN SUPPORT OF PETITION

(1) **The Petition should be granted because there is diversity and conflict of opinion between the Courts of the Sixth Circuit and the Courts of the Fifth Circuit on the validity of Claim 3 of this patent.**

As to Claim 3: The Court of Appeals for the Sixth Circuit in the case of Temco Electric Motor Company v. K-W Ignition Co. (243 Fed. 588) held **all** of the claims of this patent were valid and infringed.

The Court of Appeals for the Fifth Circuit holds that this claim 3 is invalid because of an alleged defect in its **form,** saying that the claim is incomplete, contrary to the finding of validity of all the claims by the Court of Appeals of the Sixth Circuit, and by Judge Clarke, affirmed in 243 Fed. 588; by Judge Westenhaver, in Petitioner v. Forest City Electric Co. (printed at pages 377-384 of the record herein); and by Judge Killits in Petitioner v. Halladay Co.—no opinion, but a decree printed at page 310 of this record.

In this K-W case, Mr. Justice Clarke (when District Judge) said of the patent and its claims that:

> "Assuming the fact to be, as the evidence quite clearly shows is the fact, that the plaintiff's device does really contribute to the comfort of riding in motor cars, to which it was applied, especially in Ford cars, we have in addition in this case the consideration that the device when put upon the market met with such immediate and great sales that they cannot be justly attributed to unusual advertising or other creating of the market. The sales agent for the defendant testifies that he was at Van-

couver, Canada, when he was notified of the execution of the contract of April, 1913, between the plaintiff and the defendant company, and he says that on his way home he sold between 300 and 400 sets of the road smoothers or shock absorbers before he had seen the article or knew the prices, and without the use of any literature or advertising. There were sold during the year of the life of the contract between 12,000 and 13,000 sets of shock absorbers. * * *"

(R. 390; p. 347, C. C. A. Rec. Appellee's Exhibit 14.)

"And while the construction of the patent in suit is made up of well-known elements, yet they are combined in a manner so different from any combination that preceded it, that the immediate adoption of it by the general public is very persuasive evidence that it possesses that novelty and merit which lift it to the level of invention."

(R. 390-1; p. 347, C. C. A. Rec. Appellee's Exhibit 14.)

In this K-W Ignition Co. case (243 Fed. 588), the Court of Appeals for the Sixth Circuit said of the invention and of the claims of the patent:

"The object of the patentee was to provide a shock absorber which would make riding in a Ford automobile easy. He accomplished this by supplying a set of quick-acting coil-springs in connection with a set of slow-acting and friction retarded leaf-springs originally built into the vehicle. The compression and recoil of the two sets of springs occur at different times, in consequence of which their respective pulsations are not synchronous. The result of this is that the vibrations which would otherwise be transmitted to the frame of the

vehicle are absorbed within the springs. The availability of the device for use is such that the owner of a Ford automobile, without the services of a mechanic, and without disturbing the operation or construction of his car, may, with slight instruction, remove the usual hanger which supports each end of each leaf-spring and insert the plaintiff's attachment in its stead. * * *"

"The effect of the arrangement is such that the recoil of the torsion spring begins before the full effect of the shock on the wheels can be transmitted through the leaf-spring to the body of the car and its occupants. Riding is thereby made easy." (243 Fed. 588, 589.)

The Court further said:

"The merit and simplicity of the Thompson device were immediately recognized, and it promptly went into extensive use. Salesmen, before seeing it, and without the use of any advertising matter, found many ready buyers. The demands of the trade exceeded the ability to supply it."

"The shock from the wheels passes through the leaf-spring first. The coiled spring is not between the axle and the leaf-spring and no one suggests how, within the terms of the patent (prior patent), a construction is permissible or possible thus to place it. The result which he (a former patentee whose patent was relied on as a defense) obtains and his manner of obtaining it are not the same or substantially the same as those secured and employed by Thompson. * * * The remoteness of the other alleged anticipatory patents is such that they need not be mentioned. * * *" (243 Fed. 588, 589.)

In the case of Temco v. Forest City Co., the United States District Court for the Northern Dis-

trict of Ohio, Judge Westenhaver said as to the validity of this patent:

> "The defenses are the usual ones of invalidity for lack of novelty and lack of invention and non-infringement. * * Ignoring the specific prior use, the validity of plaintiff's patent is not now open to question. It was upheld by this Court, Judge (now Mr. Justice) Clarke delivering the opinion, and his decision was affirmed on appeal. * * An examination of the record in that case (the K-W case) discloses that all the patents pleaded and relied on herein as anticipation were all introduced in evidence. Six new patents only not set up in the answer as a defense or anticipation have been introduced on this hearing. They are available only as showing the state of prior art. Of these the one most relied on is No. 761,353 to J. A. Brill and W. S. Adams. This patent is for a suspension spring on a car truck and is clearly more remote in the art than others presented and relied on as an anticipation and held insufficient as a defense by the Circuit Court of Appeals. * * Furthermore the validity of this patent was sustained by Hon. John M. Killits in a suit brought by the present plaintiff against the L. P. Halladay Company in the Western Division of this District. Upon this state of facts the validity of plaintiff's patent must be taken as conclusively established."

Contrary Finding of the Fifth Circuit.

Contrary to the foregoing is the following holding by the Court of Appeals for the Fifth Circuit relative to this patent, in which the Court held claim 3 was invalid, because incomplete, following the District Court in Georgia:

"One of the claims, which was disallowed by the District Court, is for 'stanchions being adapted to limit the end motion of the leaf springs and thereby prevent the side sway of the chassis frame;' but it, as well as the other claims, describes the hanger as having a vertical movement and being guided by the stanchion. A claim for a combination of a helical and leaf spring was rejected by the Patent Office because such combination was well known in the prior art. Of necessity the side sway of the car and the thrust of the expanded leaf spring were limited by the stanchions of the shock absorber just as theretofore they had been by the stanchions of the car, and it was soon discovered that there was considerable friction between the stationary and the moving parts of the patented device.

"The idea of putting the helical spring upon a hanger instead of placing it directly between the leaf spring and the axle is not new, but appears in former patents. There was no invention involved in the use of a stanchion to limit the side sway of the car and give play to the leaf spring, as is conclusively shown by the fact that a stanchion was already in use on the Ford car. A hanger adapted to slide on a supporting stanchion so as to limit side sway was the only thing in the Thompson patent which was new. Everything else in the combination was known in the prior art and could not become the basis of a claim to invention. Therefore the patent in suit being for a combination of well known parts is for a narrow invention. * * *"

"Appellee has filed a cross-appeal and insists that the claim which the district court dissolved is valid. That claim is about as vague as it could be made. As pointed out by

the district judge it fails to specify the means by which the leaf and helcial springs could be connected to and guided by the stanchion. To sustain a claim as general as this is would be to allow a patent for a 'result and not for the mechanism producing it.' American Crayon Co. v. Sexton, 139 Fed. 564."

On this question of the completeness of claim 3, its consequent validity and the feature of limiting side sway, the Court of Appeals of the Sixth Circuit said (243 Fed. 589):

> "The stanchion supports the torsion spring, limits the side movements of the leaf spring, and is provided at its upper end with a nut or stop which restricts the upward movement of the casing."

Thus the Court of Appeals for the Sixth Circuit has held all the claims, including claim 3, to be valid and complete, whereas the District Court and the Court of Appeals for the Fifth Circuit held claim 3 to be invalid because incomplete. The Court of Appeals for the Fifth Circuit in affirming its District Court insists that claim 3

> "fails to specify the means by which the leaf and helical springs could be connected to and guided by the stanchion."

Contrary thereto, the last quotation above from the Court of Appeals of the Sixth Circuit specifically finds that in the patent in suit the claims call for means by which the leaf and helical springs are connected to and guided by stanchions and the claims are therefore valid.

Obviously the claim is valid because the claim recites the very element said to be missing by the Court of Appeals of the Fifth Circuit, to-wit:

> "the means by which the leaf and helical springs could be connected to and guided by the stanchion"

by reciting

> "the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent the side sway of the chassis frame."

Thus the parts are described as having the necessary relationship as found by the Court of Appeals of the Sixth Circuit, which relationship was not found or was overlooked according to the Court of Appeals of the Fifth Circuit. The two Circuits are in direct conflict. The claim is in the form of the kind accepted and approved by the Patent Office and upheld by the Courts in sustaining countless numbers of patents. The United States Patent Office found this claim complete, and all these Courts in the Sixth Circuit have found it complete, while the Courts of the Fifth Circuit found to the contrary.

(2) **The Petition should be granted because there is a diversity of opinion on the subject of infringement between the Courts of the Sixth Circuit and the Court of Appeals for the Fifth Circuit.**

As to Infringement: The structure known as the Apco Shock Absorber is identical in every infringing particular with the structure of the K-W Ignition Company, both operating in the same manner with the same result.

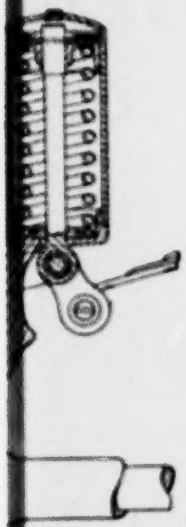
The K-W Ignition Co. absorber was held to be an infringing absorber in the Sixth Circuit. The like Apco absorber was held not to be an infringing shock absorber by the Court of Appeals of the Fifth Circuit.

The various District Courts of the Sixth Circuit

Plaintiff's Exhibit 6

6. 3

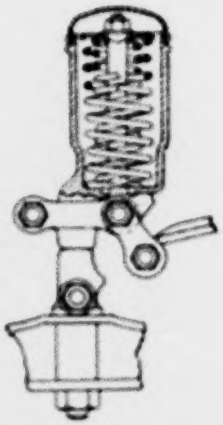
ITION CO.,
ND INFRIN-
WITH OR WITHOUT
243 FED. 590



M K.W.
CO, CASE
ORD P. 181

FIG. 4

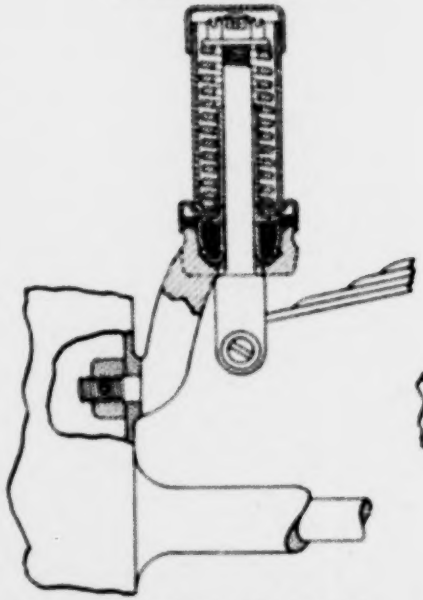
ONE OF TEMPCO, FORMS WITHIN PATENT IN K.W. CASE C.C.A. 243 FED. 588



FROM K.W. IGNITION CO, CASE MAIN RECORD P. 197

FIG. 5

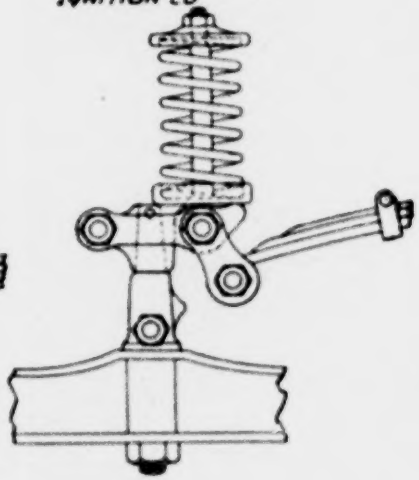
COMPLAINANT'S INFRINGEMENT ILLUSTRATION DEFENDANT'S ATTACHMENT, FOREST CITY CO.



FROM FOREST CITY SUIT-HELD INFRINGED.

FIG. 6

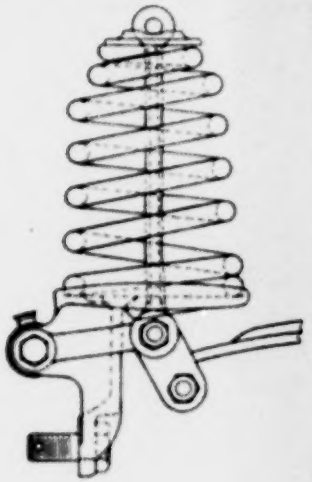
ORIGINAL THOMPSON ABSORBER WITH LINK AND WITHOUT CASING COPIED BY K.W. IGNITION CO



FROM K.W. IGNITION CO. CASE MAIN RECORD P. 199

FIG. 7

APCO PRESENT TYPE, ADDED RADIUS LINK LIKE K.W. AND REMOVED COVER. C.C.A. 6TH CIR., HOLDS. DOES NOT AVOID INFRINGEMENT.

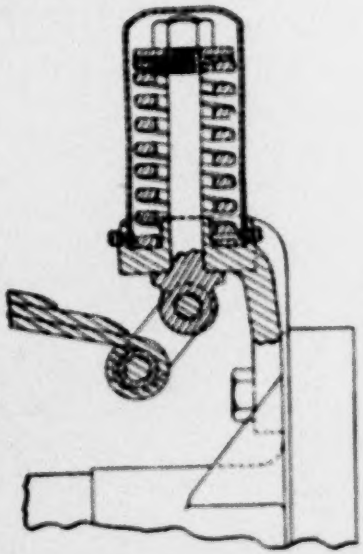


APCO CASE.

Plaintiff's Exhibit 6

FIG. 1

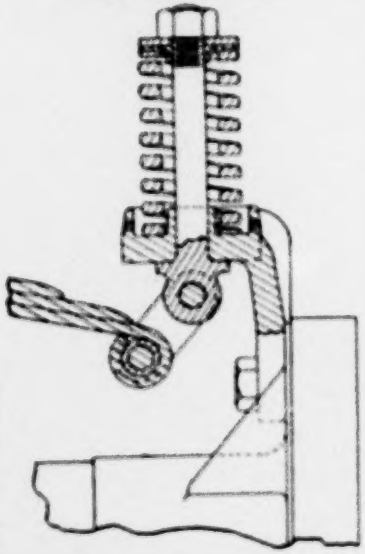
HALLADAY CONSTRUCTION-
HELD BY THIS COURT
AN INFRINGEMENT.



FROM HALLADAY
CASE.

FIG. 2

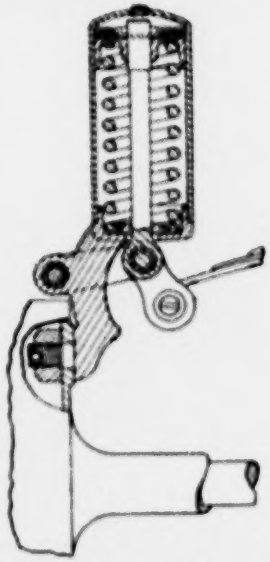
SAME AS FIG. 1 CASING
REMOVED C.C.A. 6TH
CIR. 243 FED. 590.
SAYS PRESENCE OF
CASING IMMATERIAL.



FROM HALLADAY
CASE.

FIG. 3

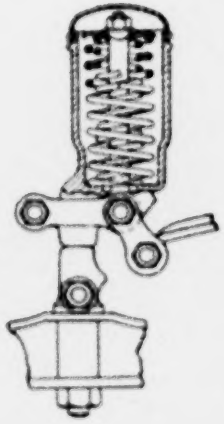
K.W. IGNITION CO.,
TYPE FOUND INFRIN-
GEMENT WITH OR WITHOUT
CASING 243 FED. 590



FROM K.W.
IGNITION CO., CASE
MAIN RECORD P. 181

FIG. 4

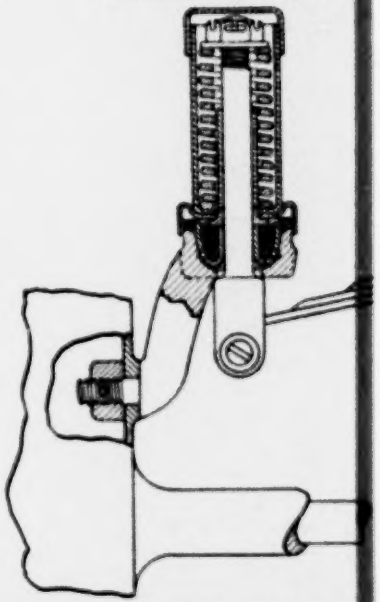
ONE OF TEMPCO., FORMS
WITHIN PATENT IN K.W.
CASE C.C.A. 243
FED. 588



FROM K.W.
IGNITION CO., CASE
MAIN RECORD P. 197

FIG. 5

COMPLAINANT'S INFR-
INGEMENT ILLUSTRATIO
DEFENDANT'S ATTACHMEN
FOREST CITY CO.



FROM FOREST CITY SUIT
HELD INFRINGED.

in cases involving the same Apco shock absorber, such as against The Pennsylvania Rubber & Supply Co., the Cooper Rubber Co., the Belknap Hardware Company and the Tennessee Mill & Mine Supply Co., all entered decrees of infringement, the defendants in which cases acquiesced in the validity and infringement of the patent in suit.

Infringement by shock absorbers of this type of the patent in suit has been regarded, since the decision of Judge Clarke in the K-W Ignition Co. case in 1916, and particularly since the decision of the Court of Appeals for the Sixth Circuit, 243 Fed. 588, affirming Judge Clarke, as settled for a period of nearly nine and ten years respectively.

Therefore, **established rights of property have been founded upon this unbroken chain of decisions** in the Sixth Circuit, while a different rule of law as to this patent prevails in the Fifth Circuit.

The Court of Appeals for the Fifth Circuit said on the subject of infringement by Respondent's Apco shock absorber:

> "The only question presented for decision, as it appears to us, is whether a radius link designed to control side sway is the equivalent of a sliding hanger used for the same purpose. If the means used by appellant are substantially different from those of the patent there was no infringement because the patent, being for the combination of well known parts, is for a narrow invention. * * *"
>
> "In our opinion the radius link which defendant had a right to use is essentially different from the sliding hanger. In appellee's device the coil spring is held upright against the stanchion by friction, while in appellant's device the rod or hanger is held in position,

not by friction, but by the radius link which keeps it from sliding against either the springs or the stanchion. * * *"

As against this holding by the Fifth Circuit, the Sixth Circuit Court of Appeals had previously said as to the like K-W absorber on the issue of infringement:

"In the defendants' device the upright guide is divided, the lower end of its upper portion being connected by a link with the leaf spring, its upper end carrying a cup-shaped enlargement fitting over the top of the coiled spring, a leather packing on the top of which enlargement engages the inner wall of the cylindrical casing, forming what defendants call a 'dash pot,' the lower end of its lower portion being bolted to the axle. The hanger which acts on the coiled spring is thus inside instead of outside the coiled spring, but produces the same action thereon as does the casing or hanger of plaintiff's spring. Apart, at least, from the so-called 'dash pot' and the radius link later referred to, there is thus a mere reversal of parts. **The hangers in the two absorbers differ in form, but not in function.** As said in our former opinion:

"'The springs in a Ford automobile equipped with defendants' device receive shocks in the same order, operate in the same manner, and produce the same results as those in a Ford car on which plaintiff's springs are used.'" (283 Fed., pp. 875-6.)

* * * * * * * * *

"Its guide or stanchion is divided. At the top of the lower portion, which fits into the hole in the Ford axle, is a platform which serves substanitally the purpose of the plat-

form on the Thompson guide. An outside cylindrical cover may be used or not, as the manufacturer chooses; but, if used, it serves no purpose other than to inclose the coiled spring. The efficient casing or hanger which acts on the torsion spring is inside instead of outside of such spring and immediately surrounds the upper end of the upper part of the guide. The lower end of this portion of the guide is affixed to a link which connects it with the leaf spring. Its upper end, to limit the upward movement of the spring, has a projection which fits into a cavity on the bottom of the cup-like formation which the hanger is made to assume. The hanger's cup-like top fits over the top of the coiled spring, and, when a shock is received by the wheels, produces precisely the same action on the spring as does the casing or hanger in the plaintiff's spring. The hangers in the two respective absorbers differ in form, but not in function. The springs in a Ford automobile equipped with defendants' device receive shocks in the same order, operate in the same manner, and produce the same results as those in a Ford car on which the plaintiff's springs are used." (243 Fed., pp. 590-1.)

As to this same K-W absorber, which is identical with the Apco absorber, Mr. Justice Clarke said, when sitting in the District Court:

> "This shock absorber manufactured by the defendant has been introduced in evidence, and it seems very clear that in organization, mode of operation and result, it is in substance the same combination as that of the plaintiff's patent, and that it therefore infringes it." (See R. 391; pages 345, 348, C. C. A. Record in the K-W case, Plaintiff's Exhibit 14 in this case.)

As to the question of infringement by the similar Forest City shock absorber, in the case of Petitioner v. The Forest City Co., Judge Westenhaver further said:

> "I am of the opinion that defendant's construction is an infringement. This obviously was Judge Clarke's view when he granted the preliminary injunction and seems then to have been the view of defendant's counsel. * * *
>
> "The close similarity of defendant's absorber to plaintiff's is apparent at a glance. It has a stanchion or support at one end adapted to fit in the hole in the axle or brake flange to support the torsion or spiral spring, and to limit the side movement of the leaf springs. (Likewise in appellant's asorber.) It has also a hanger, having vertical movement and guided by the stanchion or support. (Again likewise in appellant's device.) The leaf spring of the automobile when the bracket is mounted on the axle is connected with the hanger, and the torsion or spiral spring is supported in the stanchion above the axle, and is itself supported by the hanger. The shocks from the automobile wheels are first received by the torsion spring and are either wholly taken up by it or are modified and diminished before they reach the leaf spring, through which, if at all, they are communicated to the car-body. (So also with appellant's absorber.) Not only are the operating parts similar, but the mode of operation is similar. Both combinations depend on two kinds of springs; one the quick-acting torsion spring, and the other, the slow-acting, friction restrained leaf spring. These springs vibrate out of synchronism. The order in which the shocks are received and absorbed, and the limitation or control upon the side

sway or lateral movement of the vehicle are essential features of plaintiff's device, and are the ones to which its success is perhaps mainly attributable. Defendant's device not only receives and absorbs the shocks in the same order, but limits and controls the side sway of the vehicle. This limitation and control of movement is obtained in plaintiff's patent by means of a shackle link and in its commercial form with the addition of a radius link, and the vertical movements of the hanger accommodate the extension and contraction of the automobile springs. (All of this applies equally to this appellant's absorber.) Defendant's device differs in that the aperture, through which the hanger operates, so as to accommodate but limit the extension and contraction of the leaf springs, is enlarged, permitting the hanger and casing to be tilted, and is supported by a ball-bearing joint."

"Notwithstanding these changes, the same function is performed and the same result is realized thereby as by the shackle link. They may do so in a somewhat different manner, but the changes are colorable merely and do not produce a new and different combination, nor avoid infringement."

(3) **The Petition should be granted because the claims of the patent in suit have been given by the Courts of the Sixth Circuit an established scope and interpretation over a period of ten years, affirmed by the Court of Appeals of the Sixth Circuit; and the decision of the Court of Appeals of the Fifth Circuit is directly in conflict therewith and contrary thereto so that the claims have one interpretation and breadth in the Sixth Circuit and another and different scope and interpretation in**

the Fifth Circuit. Weber Elec. Co. v. Freeman Elec. Co., 256 U. S. 668, 669.

The Court of Appeals for the Sixth Circuit and the various District Courts thereof have all held that the claims of this patent were sufficiently broad to include a shock absorber having a reversal of parts with a radius link such as the shock absorber of the K-W Ignition Company (and Apco) (243 Fed. 588) and that such shock absorber infringed all of such claims.

The Court of Appeals for the Fifth Circuit has held in its recent decision that claims 1, 2 and 4 (having held claim 3 invalid) are limited to the details of a sliding engagement between the hanger and the stanchion, and do not cover an absorber having a radius link.

The Court of Appeals for the Sixth Circuit said (243 Fed. 591):

> "The hangers in the two respective absorbers differ in form, but not in function. The springs in a Ford automobile equipped with defendants' device receive shocks in the same manner and produce the same results as those in a Ford car on which the plaintiff's springs are used. * * * It would be idle to say that the plaintiff, keeping within the strict terms of its patent, could not put upon the market the same device that the defendants have been making."

Therefore, the Court of Appeals for the Sixth Circuit held that the reversal of parts and the use of a radius link guide instead of the sliding guide shown in the patent drawing did not avoid infringement.

The Court of Appeals for the Fifth Circuit holds

that the patent is so limited that the radius link guide is not the equivalent of the sliding guide, and that the claims are to be limited to the sliding guide with the consequence that there is no infringement.

The Court of Appeals for the Fifth Circuit says:

> "The only question presented for decision, as it appears to us, is whether a radius link designed to control side sway is the equivalent of a sliding hanger used for the same purpose. If the means used by appellant are substantially different from those of the patent there was no infringement because the patent, being for the combination of well-known parts, is for a narrow invention. * *"
>
> "In our opinion the radius link which defendant had a right to use is essentially different from the sliding hanger. In appellee's device the coil spring is held upright against the stanchion by friction, while in appellant's device the rod or hanger is held in position, not by friction, but by the radius link, which keeps it from sliding against either the springs or the stanchion."

This results in a sharp diversity of opinion between the two Circuits as to whether these claims cover the shock absorber with the radius link, such as manufactured by the K-W Ignition Company and the Apco Manufacturing Co.

The Sixth Circuit says Yes; the Fifth Circuit says No.

Respectfully submitted,

THE TEMCO ELECTRIC MOTOR CO.,

By H. A. Toulmin,

H. A. Toulmin, Jr.,

Counsel for Petitioner.

King, Spaulding, MacDougald & Sibley,

Of Counsel for Petitioner.

March, 1926.

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United States Supreme Court

October Term, 1926
No. 325

The Temco Electric Motor Company,
Petitioner,

—v.—

Apco Manufacturing Company,
Respondent.

BRIEF FOR PETITIONER

To the Honorable The Supreme Court of the United States.

Statement of the Case.

First. This case is here pursuant to the order of this Court granting Petitioner's application for the Writ of Certiorari. (Granted April 26, 1926.) That petition was based on the ground of conflict between the opinions and judgments of the United States Circuit Court of Appeals for the Sixth Circuit (243 F. 588) and of several of the District Courts of that Circuit, embracing the judicial findings of some eight of the Judges, commencing with a former member of this Court, Mr. Justice Clarke, (Rec. 278), and the contrary judgment and opinion of one District Judge for the Northern District of Georgia and of the Court of Appeals for the Fifth Circuit. (11 F. (2nd) 109.)

Second. The exact diversity of opinion exists as to the validity of Claim 3 of Petitioner's United States Letters Patent No. 1,072,791, of September 9, 1913,

issued to Thompson & Thompson, for Improvements in Automobile Shock Absorbers, to the infringement of Claims 1, 2, 3 and 4 of said patent, and to the scope of Claims 1, 2 and 4 of the patent, as to which questions the Courts in the two Circuits differed on records that did not differ as to any matter affecting these questions—no new or different prior art was in the Fifth Circuit case over what was before the Court of Appeals in the Sixth Circuit.

Third. The points of conflict arose as follows: That Mr. Justice Clarke (when District Judge) and the Court of Appeals for the Sixth Circuit, Judges Warrington, Knappen, Denison, Donahue and Sater (some of them sitting in the Court of Appeals on the patent questions and some on the accounting), and Judges Killits and Westenhaver (sitting in the District Courts) held your Petitioner's said patent for such Shock Absorbers **(the first absorber ever devised for a Ford car)** to be good and valid as to all four of its claims; your Petitioner being later awarded a recovery of $292,938.26 by the Circuit Court of Appeals for the Sixth Circuit.

Fourth. These judgments were rendered by the District Court for the Northern District of Ohio, Eastern Division, Mr. Justice Clarke (then District Judge), and by the Court of Appeals for the Sixth Circuit, affirming him, in the case of this Petitioner versus The K-W Ignition Co. (243 Fed. 588, June 8, 1917, and 283 F. 873, 1922). **These Courts gave to the claims a scope sufficient to include shock absorbers having the same functional features and the same mode of operation as are embodied in Respondent's shock absorber involved herein.**

Fifth. Other District Courts of the Sixth Circuit, in cases involving similar structures, found this patent to be valid as to all of its claims, and to be infringed as to the entire four claims, to-wit: Judge Westen-

haver, in the United States District Court for the Northern District of Ohio, Eastern Division, July 18, 1919, in the case of this Petitioner v. Forest City Electric Company; and again by him in the Western Division, in the case of Petitioner v. Penn. Rubber & Supply Co., a jobber then dealing in the shock absorbers of this Respondent, now involved in this present suit. This trial was held in open court on issues joined on that defendant's answer setting up the prior art and denying validity of this patent, and its infringement, but counsel for that defendant did not appear until the accounting was commenced, which latter resulted in a money judgment for this Petitioner. **In its answer herein Respondent admits that the shock absorber involved in this Penn. Rubber case, so held to be an infringing device, was identical with the present Apco absorber now before this Court.** (Rec. 11, Paragraph 8, of Answer.)

Printed copies of Judge Westenhaver's opinion in this Forest City case were filed with the record that accompanied the Certiorari Petition herein, said opinion not having been published, and these copies are now available in connection with the present record.

And again by Judge Killits, in the District Court for the Northern District of Ohio, Western Division, April 10, 1916, in the case of this Petitioner v. The Halladay Company, et al. In both of these Forest City and Halladay cases the defendants made and paid cash settlements.

Sixth. Various other companies which had sold these same Apco shock absorbers, when sued by Petitioner for infringement of this same patent, **acquiesced** in the charge of infringement and in the validity of this Thompson patent, among such suits being these: one in the United States District Court for the Southern District of Ohio, Eastern Division, Judge Sater presiding, January 22, 1924—this Petitioner v. The

Cooper Rubber Co.; another in the United States District Court for the Western Division of Kentucky, Judge Moorman presiding, December, 1925—this Petitioner v. The Belknap Hardware Co.; and another in the United States District Court for the Eastern District of Tennessee, Northern Division, Judge Hicks presiding, in March, 1924, in this Petitioner v. The Tennessee Mill and Mine Supply Co. (Rec. 253, 206). The identical shock absorber of this Respondent was involved in each of these several actions just recited, and in each of which final decrees and permanent injunctions were duly entered by reason of settlements, or because of the discontinuance of the infringing acts of the respective defendants.

Seventh. Your Petitioner then later filed its bill of complaint against this Respondent, Apco Manufacturing Company, in the United States District Court for the Northern District of Georgia, Northern Division, for the infringement of said Thompson patent by the manufacture, use and sale of **these present Apco shock absorbers, which are the same absorbers as were involved in the District Courts as recited above**; and **which Apco absorbers are identical in all of their infringing particulars with The K-W Ignition Company shock absorber held to be an infringement by the Court of Appeals of the Sixth Circuit** as above stated; and are also substantially the same shock absorbers structurally and in their mode of operation as those held to be infringements by Judges Westenhaver and Killits in the Forest City and Halladay suits, as recited above.

Eighth. On the 31st day of October, 1924, the District Court for the Northern District of Georgia sustained the validity of this patent as to claims 1, 2 and 4, and found that they were infringed by this Apco absorber, following thus far the decision of the Court of Appeals for the Sixth Circuit in 243 Fed. 588 supra;

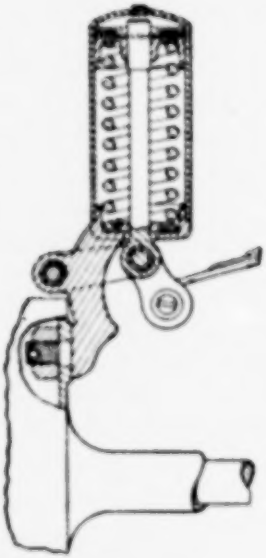
but departed from the judgment of that Court of Appeals as to claim 3, and held it to be void, on a question affecting the form or recitals of the claim.

Ninth. That said cause later came on to be heard, January 27, 1920, in the Court of Appeals for the Fifth Circuit, where was rendered the judgment now to be reviewed, holding the Thompson patent to be invalid as to Claim 3, because of said alleged defect in its mere **form or recitals**; holding Claims 1, 2 and 4 of the patent were limited to their narrowest details; and holding in consequence that these Claims 1, 2 and 4 were not infringed by this same Apco shock absorber (Rec. 275, folio 381), though admitting the validity of these claims. But this same Apco shock absorber, Judge Westenhaver held, in the Penn. Rubber & Supply Co. case, was an infringement, and as to which question of infringement the numerous defendants acquiesced in in the cases recited supra in this brief, while the absorber before the Sixth Circuit Court of Appeals in Petitioner v. K. W. Co., supra, **is in all functional features and its mode of operation the same also as Respondent's absorber involved herein.** See the illustrations on page 6.

Before Sixth Circuit

FIG. 3

K.W. IGNITION CO., TYPE FOUND INFRINGEMENT WITH OR WITHOUT CASING 243 FED. 590



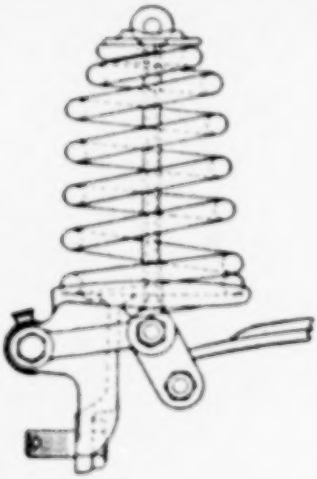
FROM K.W IGNITION CO, CASE MAIN RECORD P 181

K-W Infringing Absorber (From Plaintiff's Exhibit 6) Petitioner v. K-W Ignition Co., 243 F. 588

Before Fifth Circuit

FIG. 7

APCO PRESENT TYPE. ADDED RADIUS LINK LIKE K. W. AND REMOVED COVER C.C. A. 6TH CIR., HOLDS DOES NOT AVOID INFRINGEMENT.



APCO CASE.

Apco Absorber (From Plaintiff's Exhibit 6) Petitioner v. Apco Mfg. Co.

So much for the statement of the nature and character of this case.

What the Sixth Circuit Judges Held Regarding This Patent.

The Court of Appeals for the Sixth Circuit in the case of Petitioner v. K-W Ignition Co. (243 Fed. 588) held all of the claims of this patent were valid and infringed.

The Court of Appeals for the Fifth Circuit held that Claim 3 is invalid because of an alleged defect in its form, saying that the claim is "vague as can be" and "incomplete," contrary to said finding of validity of all the claims by the Court of Appeals of the Sixth Circuit, and by Judge Clarke, affirmed in 243 Fed. 588; by Judge Westenhaver, in Petitioner v. Forest City Electric Co., and by Judge Killits in Petitioner v. Halladay Co.—no opinion, but decree printed at page 310 of this record.

In this K-W case, Mr. Justice Clarke (when District Judge) said of the patent and its claims that:

> "Assuming the fact to be, as the evidence quite clearly shows is the fact, that the plaintiff's device does really contribute to the comfort of riding in motor cars, to which it was applied, especially in Ford cars, we have in addition in this case the consideration that the device when put upon the market met with such immediate and great sales that they cannot be justly attributed to unusual advertising or other creating of the market. The sales agent for the defendant testifies that he was at Vancouver, Canada, when he was notified of the execution of the contract of April, 1913, between the plaintiff and the defendant company, and he says that on his way home he sold between 300 and 400 sets of the road smoothers or shock absorbers before he had seen the article or knew the prices, and without the use of any literature or advertising. There were sold during the year of the life of the contract between 12,000 and 13,000 sets of shock absorbers, * * *"

(R. 390; p. 347, C. C. A. Rec. Appellee's Exhibit 14.)

"And while the construction of the patent in suit is made up of well-known elements, yet they are combined in a manner so different from any combination that preceded it, that the immediate adoption of it by the general public is very persuasive evidence that it possesses that novelty and merit which lifts it to the level of invention."

(R. 390-1; p. 347, C. C. A. Rec. Appellee's Exhibit 14.)

In this K-W Ignition Co. case (243 Fed. 588), the Court of Appeals for the Sixth Circuit said of the invention and of the claims of the patent:

"The object of the patentee was to provide a shock absorber which would make riding in a Ford automobile easy. He accomplished this by supplying a set of quick-acting coil-springs in connection with a set of slow-acting and friction-retarded leaf-springs originally built into the vehicle. The compression and recoil of the two sets of springs occur at different times, in consequence of which their respective pulsations are not synchronous. The result of this is that the vibrations which would otherwise be transmitted to the frame of the vehicle are absorbed within the springs. The availability of the device for use is such that the owner of a Ford automobile, without the services of a mechanic, and without disturbing the operation or construction of his car, may, with slight instruction, remove the usual hanger which supports each end of each leaf-spring and insert the plaintiff's attachment in its stead. * * *"

"The effect of the arrangement is such that the recoil of the torsion spring begins before the full effect of the shock on the wheels can be transmitted through the leaf-spring to the body of the car and its occupants. Riding is thereby made easy." (243 Fed. 588, 589.)

The Court further said:

> "The merit and simplicity of the Thompson device were immediately recognized, and it promptly went into extensive use. Salesmen, before seeing it, and without the use of any advertising matter, found many ready buyers. The demands of the trade exceeded the ability to supply it."
>
> "The shock from the wheels passes through the leaf-spring first. The coiled spring is not between the axle and the leaf-spring and no one suggests how, within the terms of the patent (prior patent), a construction is permissible or possible thus to place it. The result which he (a former patentee whose patent was relied on as a defense) obtains and his manner of obtaining it are not the same or substantially the same as those secured and employed by Thompson * * * The remoteness of the other alleged anticipatory patents is such that they need not be mentioned. * * *" (243 Fed. 588, 589.)

In the case of Temco v. Forest City Co., Judge Westenhaver said as to the validity of this patent:

> "The defenses are the usual ones of invalidity for lack of novelty and lack of invention and non-infringement. * * * Ignoring the specific prior use, the validity of plaintiff's patent is not now open to question. It was upheld by this Court, Judge (now Mr. Justice) Clarke delivering the opinion, and his decision was affirmed on appeal. * * * An examination of the record in that case (the K-W case) discloses that all the patents pleaded and relied on herein as anticipation were all introduced in evidence. Six new patents only not set up in the answer as a defense or anticipation have been introduced on this hearing. They are available only as showing the state of prior art. Of these the one most relied on is No. 761,353 to J. A. Brill and W. S. Adams. This patent is for a suspension spring on a car truck and is clearly more remote in the art than others pre-

sented and relied on as an anticipation and held insufficient as a defense by the Circuit Court of Appeals. * * * Furthermore the validity of this patent was sustained by Hon. John M. Killits in a suit brought by the present plaintiff against the L. P. Halladay Company in the Western Division of this District. Upon this state of facts the validity of plaintiff's patent must be taken as conclusively established."

Claim 3 of the Patent and the C. C. A. of the Fifth Circuit.

This Court held Claim 3 was invalid, because "vague" and "incomplete," following in this respect the District Court in Georgia. The District Court in its opinion said:

> "For want of any statement as to how the leaf spring and helical spring are to be connected to and guided by the stanchions we think Claim 3 is incomplete and void." (Rec. top page 257.)

The Circuit Court of Appeals of the Fifth Circuit said of this claim:

> "Appellee (this petitioner) has filed a cross-appeal and insists that the claim which the District Court disallowed is valid. That claim is about as vague as it could be made. As pointed out by the District Judge, it fails to specify the means by which the leaf and helical springs can be connected to and guided by the stanchions. To sustain a claim as general as this is would be to allow a patent for a 'result and not for the mechanism producing it'." (Rec. 382.)

The claim here in question, and thus technically criticized and destroyed, reads as follows:

> "3. In automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to the road wheels, the combination of upright stanchions with the axle of the ground wheels, said stanchions being attached to the outer ends of said axle, leaf springs extending above the axle and between the stanchions, and support-

> ing the chassis frame, the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame, hangers for the outer ends of said leaf springs, said hangers having a vertical movement and being guided therein by said stanchions, and coiled springs interposed between said leaf spring hangers and said axle of the ground wheels."

Involving the subject-matter found in Claim 3, and its consequent validity, and the feature of limiting the side sway, the Court of Appeals for the Sixth Circuit said:

> "The stanchion supports the torsion spring, limits the side movements of the leaf spring, and is provided at its upper end with a nut or stop which restricts the upward movement of the casing."

Here it will be observed that the last-named Court found that the "stanchion supports the torsion spring" and "limits the side movements of the leaf spring." Turning to Claim 3 quoted above, it will be seen that it specifies the elements by which these two functions are carried into effect. It calls for the "upright stanchions," the "leaf springs extending above the axle and between the stanchions," the "said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame," and "hangers for the outer ends of said leaf springs, said hangers having vertical movement and being guided therein by said stanchions"; and then adds to the combination "coiled springs interposed between said leaf spring hangers and said axle."

Respecting this same matter as to limiting the side sway, Judge Westenhaver in Petitioner v. Forest City, said:

> "Defendant's device not only receives and absorbs the shocks in the same order, but limits and controls the side sway of the vehicle. This limita-

> tion and control of movement is obtained in plaintiff's patent by means of a shackle link and in its commercial form with the addition of a radius link, and the vertical movements of the hanger accommodate the extension and contraction of the automobile springs."

Manifestly, therefore, the technical objection of the Courts in the Fifth Circuit that this claim does not specify the means by which the "leaf and helical springs" could be connected to and guided by the stanchions, is incorrect and untenable. The claim distinctly says that the leaf springs extend between the stanchions; that the hangers are "for the outer ends of the leaf springs"; and that "these hangers have vertical movement" and are "guided therein by the stanchions"; the coiled springs being then added and stated to be "between" the hangers and the axle.

We perceive no incompleteness in the claim, as stated by the District Court in the Fifth Circuit; and no vagueness in the claim as observed by the Court of Appeals for that Circuit, who declared the claim to be "about as vague as it could be made." (Rec. 276, near bottom of page.) We find none of these infirmities in the claim; and neither did Mr. Justice Clarke when District Judge; nor Judges Warrington, Knappen, Denison, Donahue and Sater, when they decided the patent questions and the accounting and awarded this Petitioner the judgment for $292,938.26; nor did Judges Killits and Westenhaver when they sustained the patent—Judge Westenhaver twice, once against the Penn. Rubber & Supply Co., and once against The Forest City Company, in which latter case he wrote an elaborate opinion.

If this claim has such legal disability, incompleteness or vagueness as would justify reversing the judgment of the Patent Office in allowing it, and would support a decree of invalidity, certainly such defects

could not have escaped the astuteness of these numerous learned and experienced Judges in patent causes, in litigation where the patent was as hotly contested as the amount of recovery in the K-W case indicates it must have been.

It was a singular venture for the District Judge in Atlanta to write this declaration against the validity of Claim 3 in an opinion first rendered merely on a motion for a preliminary injunction—then later adopted when he decided the case on its merits. It was also an unusual disregard of the rule of comity and the doctrine of stare decisis for the Court of Appeals of the Fifth Circuit to refuse to follow the determinations concerning the validity of this patent as a whole by the very numerous Judges in the Sixth Circuit—not on any new evidence or new condition, but only on a forced and unnatural interpretation of all the claims, and of Claim 3 in particular.

We, therefore, submit that the rulings of both of these Courts of the Fifth Circuit as to Claim 3 are a singular instance of where an alleged defect in the mere form of a claim has been permitted unmeritoriously to prevail over the more wholesome course of the very numerous Judges in the Sixth Circuit in recognizing substance instead of pursuing the phantom of form. And that, after all, Claim 3 is, in fact, not what these Courts of the Fifth Circuit said it was, because the claim actually recites what they said it did not contain, namely, "the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent the side sway of the chassis frame."

And likewise we complain of the action of the Fifth C. C. A. in imposing this narrow scope upon Claims 1, 2 and 4, to the defeat in that Circuit of the rights of property embodied in these claims as upheld and maintained by Mr. Justice Clarke, Judge Warrington,

Judge Knappen, Judge Sater, Judge Denison, Judge Donahue, Judge Westenhaver and Judge Killits.

The Thompson Patent, No. 1,072,791, September 13, 1913.

This patent is based upon a novel and valuable invention in shock absorbers of wide-spread public adoption by vast numbers of Ford automobile users.

As will be seen by reference to the patent itself, a mechanical embodiment of this invention comprises a stanchion or guide D, mounted directly on the front axle of a Ford automobile, as in Figs. 1, 2 and 3 of the patent drawings; or on the brake flange J of the rear axle, as shown in Fig. 4; and a hanger or part C which is supported by the coil-spring G, and in turn supports the leaf-spring A of the machine through the intermediary of a link or shackle B.

As all shocks and "bumps" originate in the wheels by their heavy and rapid contact with the roadway, they are quickly and positively transmitted to the axle and the stanchions D, which are mounted thereon. From the stanchions the shocks enter the lower end of the coil-springs. But before they can reach the hangers C, which rest upon the upper ends of these coil-springs, these springs wholly or largely absorb or "iron out" these shocks by their rapid vibrations or quick compressions and expansions. In the case of "light" shocks, these coil springs so fully absorb the disturbance that it never reaches the occupants in the machine. But in that of "heavy" shocks, the disturbance is partly absorbed by the coil-springs and the unabsorbed remainder passes on through the hanger (C) and into the leaf-spring by which, due to its long, sweeping vibrations, the disturbance is either wholly "ironed out" and lost, or reaches the car-body in such a subdued and enfeebled state as not seriously to disturb the occupants. As the patentees advise the public in their specifications:

"A further object is to separate the spring element into sets of members, each set acting in series, but in which a difference exists between the members of each set in the time of compression and recoil, for the purpose of causing the spring movement to have the nature of a series of pulsations, out of synchronism with each other, and therefore causing to be absorbed within the spring element itself, vibrations that would otherwise be transmitted to the car frame. We accomplish this by the use of the slow acting friction-retarded leaf-spring of common construction, and combining in action with it, the quick-acting coiled spring, together with devices which render the mechanism efficient and durable. * * *

"The action which takes place in our spring suspension when the vehicle is in motion is as follows: Shocks to the road wheel is absorbed more rapidly by the quick acting coiled spring than by the slow-acting friction restrained leaf-spring. The result is that shock to the road wheel is first absorbed by the coiled spring, and therefrom is transmitted to the body of the car and the occupants through the slow acting leaf-spring. As the compression and recoil of the leaf-spring is not synchronous with that of the coiled spring, the recoil of the coiled spring begins to take place before the full effect of shock to the road wheel can be transmitted through the leaf spring to the body of the car. This seesawing action, as it were, between the quick-acting coiled spring and the slow-acting leaf-spring causes a large portion of the effect from vibration to be nullified by the action of one and reaction of the other of these springs taking place simultaneously, thus absorbing within the spring element the sharper vibrations, thereby making the car more easy riding."

We insert (opposite page 30) a series of illustrations, a reproduction of Petitioner's Exhibit 6, Rec. 284, showing the various absorbers to which, respectively, the Courts were referring in the following quo-

tations. These illustrations include also Respondent's absorber, at the extreme right.

Mr. Justice Clarke on the Thompson Patent.

Mr. Justice Clarke (then District Judge) in the case of this Petitioner against The K-W Ignition Company, said in his opinion that:

> "Assuming the fact to be, as the evidence quite clearly shows is the fact, that the plaintiff's device does really contribute to the comfort of riding in motor cars, to which it was applied, especially in Ford cars, we have in addition in this case the consideration that the device when put upon the market met with such immediate and great sales that they cannot be justly attributed to unusual advertising or other creating of the market. The sales agent for the defendant testifies that he was at Vancouver, Canada, when he was notified of the execution of the contract of April, 1913, between the plaintiff and the defendant company, and he says that on his way home he sold between 300 and 400 sets of the road smoothers or shock absorbers before he had seen the article or knew the prices, and without the use of any literature or advertising. There were sold during the year of the life of the contract between 12,000 and 13,000 sets of the shock absorbers. * * *" (Rec. bottom 282.)

Speaking of the mode of operation of this Thompson shock absorber, embraced in the patent in suit, Mr. Justice Clarke further said:

> "The theory upon which the plaintiff claims that the construction described in its patent is useful and novel is that since a coil-spring acts more quickly than a leaf-spring, and since in the patent in suit the coil-spring is interposed directly between the axle of the car and the leaf-spring, the shock to the wheel on the road will be absorbed more rapidly by the quick-acting coil-spring than by the slow-acting friction restrained leaf-spring with the result that the compression and recoil

of the leaf-spring is not synchronous with that of the coil-spring, and that therefore the full effect of the shock to the wheel will not be transmitted to the body of the vehicle or to the persons riding in it. That this is not a fanciful theory seems to be established by the evidence, and that the defendants are not in a position to in good faith dispute it is abundantly proved by the manner in which they advertised the construction of the patent and held it out to the public as contributing to the comfort of the riders, especially in Ford cars, and as contributing also to reduced wear of tires. Up to the time of trial the defendant continued to make the same claims for the shock absorber which it has manufactured and sold since the contract with the plaintiff was terminated." Ibid* (Rec. 281-2.)

Court of Appeals for the Sixth Circuit on the Thompson Patent.

In affirming Mr. Justice Clarke, the Court of Appeals for the Sixth Circuit, Judges Warrington, Knappen and Sater, the latter writing the opinion, said:

"The object of the patentee was to provide a shock absorber which would make riding in a Ford automobile easy. He accomplished this by supplying a set of quick acting coil-springs in connection with a set of slow acting and friction retarded leaf-springs originally built into the vehicle. The compression and recoil of the two sets of springs occur at different times, in consequence of which their respective pulsations are not synchronous. The result of this is that the vibrations which would otherwise be transmitted to the frame of the vehicle are absorbed within the springs. The availability of the device for use is such that the owner of a Ford automobile, without the services of a mechanic, and without disturbing the operation or construction of his car, may, with

*(That defendant first bought the absorbers from this Petitioner and resold them, but later both made and sold the infringing absorber which in all essentials was like the present Respondent's absorber.)

slight instruction, remove the usual hanger which supports each end of each leaf-spring and insert the plaintiff's attachment in its stead. * * *"

"The effect of the arrangement is such that the recoil of the torsion spring begins before the full effect of the shock on the wheels can be transmitted through the leaf spring to the body of the car and its occupants. Riding is thereby made easy." (243 Fed. 588,589.)

The Court further said:

"The merit and simplicity of the Thompson device were immediately recognized, and it promptly went into extensive use. Salesmen, before seeing it and without the use of any advertising matter, found many ready buyers. The demands of the trade exceeded the ability to supply it." Ibid.

Temco v. Pennsylvania Rubber Co., by Judge Westenhaver.

This Petitioner sued the Pennsylvania Rubber Company, doing business in Toledo and Cleveland, Ohio. It distributed **the Apco shock absorber here in question for the Apco Manufacturing Company,** the Respondent herein. The Apco Company, this Respondent, was joined as a party defendant on the theory that the Pennsylvania Rubber Company was in effect a branch house of the Apco Company, doing business in Ohio. Later when this turned out not to be the exact fact, the bill was dismissed as against the Apco Company for want of jurisdiction, but retained against the Pennsylvania Rubber Company.

It was tried on December 3, 1923, before Judge Westenhaver, sitting in Toledo. It was necessary to make a prima facie case because an answer had been filed denying the equity of the bill. Groton v. Clark, 136 Fed. 27 (C. C. A. 8th Circuit); also Rogers v. Menhall, 13 Fed. 59 (C. C.); Klink v. Chicago, 219 Fed. 457 (C. C. A. 8th Circuit).

A transcript of the trial in that case has been filed as

an exhibit in this present case. (Petitioner's Exhibit No. 30.) Mr. Keller, counsel for Respondent in this present case, and former U. S. Judge Day of Cleveland, were counsel of record in this Pennsylvania Rubber case. They were notified of the trial but did not attend. When the trial opened Judge Westenhaver said:

> "Mr. Owen (a Toledo lawyer) reported to us that Mr. Keller advised him that he hadn't any intention of appearing to interpose a defense." (Last page of transcript.)

The Court at the conclusion of the presentation of the patent with proof of its infringement by Ex-Commissioner of Patents, Hon. James T. Newton, who acted as this Petitioner's expert, and who also exhibited **specimens of the Apco shock absorbers, identically such as are in the present case,** entered a decree substantially like that entered in the Forest City case, (Rec. 251) the necessary verbal changes being made.

So here was an adjudication that **this Apco absorber is an infringement of Petitioner's patent,** which we think ought to have had due weight with the Courts of the Fifth Circuit.

The I. J. Cooper Rubber Co. Case.

If the Court will refer to Rec. 253, it will find that a decree was entered against The I. J. Cooper Rubber Company of Columbus, Ohio, after suit by this Petitioner on this Thompson patent had been brought. The defendant settled by paying an agreed sum for the **infringement committed by selling these same Apco shock absorbers which it had purchased from this Respondent.**

Tennessee Mill & Mine Supply Co. Case.

This company on being sued by this Petitioner as an infringer of the Thompson patent by reason of selling **these Apco shock absorbers,** purchased from the pres-

ent Respondent, consented to a decree and made a settlement by paying an agreed sum.

The Belknap Hardware Co.

By referring to the injunction in this Belknap case, (Rec. 206), the Court will further see that this Petitioner sued the above-named company for infringing the Thompson patent by selling these Apco shock absorbers in Louisville, Kentucky, after purchasing such absorbers from the Respondent in the present case. A preliminary injunction was issued by the Court and the Belknap Company gave up further infringement.

All these are matters of weight, in which business men have acquiesced in the controlling position in this art of the Thompson patent, in addition to the judgments of the Courts. And all of this, which arose in the numerous Courts of the Sixth Circuit, the Courts of the Fifth Circuit gave practically no heed to.

Validity and Infringement Questions Were Stare Decisis When Petitioner Entered the Fifth Circuit.

The prevailing rule of law, which we, of course, realize we need not so much as mention in this Court, and which we merely refer to by way of presenting a position of strength of which the Courts in the Fifth Circuit deprived Petitioner after its long and expensive struggle in the Sixth Circuit, is that in a later case on the same patent, a Court will follow, adopt and apply the decisions of the Courts made in earlier cases on the questions of the validity and scope of a patent, and will treat these questions as stare decisis, unless there is new and material evidence in the later case of such a character as would clearly have caused the Courts in the previous cases to have decided otherwise than they did.

And on the question of infringement the same rule also prevails and is universally applied where the earlier and later infringing devices are the same or substantially the same in arrangement of parts and mode of operation as were those involved in the earlier cases.

And the force of these rules and their binding effect

in the later case is increased when an earlier decision was by a Circuit Court of Appeals; in this instance by the very experienced Court of Appeals for the Sixth Circuit.

These rules are based on sound public and judicial policy—that of uniformity of decisions; and especially so amongst Federal Courts when determining rights of property based on the same Federal grant—Letters Patent of the United States—as in the case at bar. This rule is further supported by the American and English doctrine of precedents—a doctrine which probably largely distinguishes American and English jurisprudence from that generally prevailing in other countries, and which doctrine long ago appeared even in English literature.

> "Set it down thyself, as well to create good precedents as to follow them."
>
> Bacon, Great Place.

> "He hath lately found out, among the old Records of the Tower some Precedents for raising a Tax called Ship-Money."
>
> Howell, Letters, I. vi. 11.

> "My Lord Melun, let this be copied out, and keep it safe for our remembrance: return the Precedent to these Lords again."
>
> Shakespeare's King John v. 2, 3.

In Hobbs v. Beach, 180 U. S. 389, in which even this high Supreme Court gave heed to prior decisions of lower Courts concerning patent adjudications, this Court said:

> "Of course, we are bound to give to this question of anticipation an independent consideration. At the same time, we feel ourselves bound to defer somewhat to this unanimity of opinion upon the part of so many learned and distinguished judges, whose lives have been so largely devoted to the examination of patent causes."

Some of the cases which lay down these rules and in which they have been applied, are the following:

Gormley & Jeffery Tire Company v. United States Agency, 177 Fed. 692.

Beach v. Hobbs, 92 Fed. 147.

Cincinnati Butchers' Supply Co. v. Walker, 230 Fed. 433-4.

Concrete Appliances v. Gomery, 284 Fed. 518.

Adt v. Kerstein, 259 Fed. 277.

Jay v. Sparks-Withington, 258 Fed. 45.

Meurer Steel Barrel Co. v. Draper Mnfg. Co., 260 Fed. 410.

Flat Slabs Patents Co. v. Wright, 283 Fed. 345.

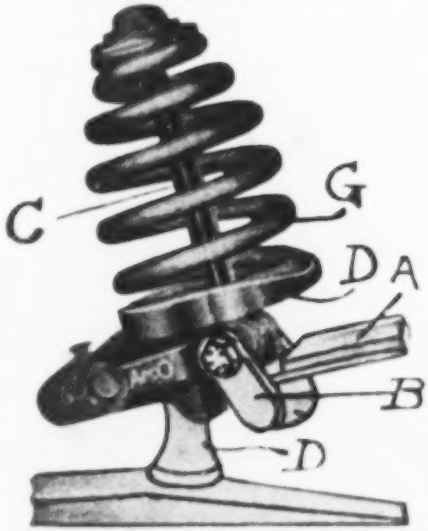
Vacuum Cleaner v. Thompson, 258 Fed. 239.

And it must be remembered that the Apco absorber and the K-W absorber are practically identical in elements or parts, in the relation of those parts, in their mode of operation, and in the result produced, so that the rule of stare decisis applies now as well to infringement as to the validity of the Thompson patent.

Respondent's Absorber.

This is generally spoken of in this Record as the "Apco" absorber. See the illustration of it given below:

Plaintiff's Exhibit 3.



This Exhibit 3 is also the same as Petitioner's Exhibit 4 in its suit against Respondent's customer in Pennsylvania and Ohio,—the Pennsylvania Rubber & Supply Company, in which Judge Westenhaver held this identical Apco absorber to be an infringement of this Thompson patent—to which suit reference is made more fully supra this brief.

It will be seen by reference to this illustration that Respondent's absorber, like the absorber of the Thompson patent, consists of a stanchion or guide D, D, mounted directly on the front axle of a Ford automobile, as in Figs. 1, 2 and 3 of the Thompson patent; a hanger C or part which is supported at its upper end by the coil-spring G, upon which the hanger and its cap rest, and which in turn supports the leaf spring A of the machine, through the intermediary of a connecting shackle B.

It is true that in the Apco absorber the stanchion D, D, and hanger C have been transposed in position, so that the stanchion is placed outside of the spring, and the hanger C is placed inside of the spring; but Petitioner has built its absorbers under this Thompson patent in both of these forms, and all of the numerous Judges who have sustained this patent have held that both forms are equally within the Thompson patent—the mere transposition of these parts not changing the mode of operation or result; and that the previous defendants who have all made their absorbers in this transposed form have been infringers. As said by the Court of Appeals for the Sixth Circuit:

> "**An outside cylindrical cover may be used or not, as the manufacturer chooses; but, if used, it serves no purpose other than to enclose the coil-spring.** The efficient casing or hanger which acts on the torsion spring is inside (in the K-W absorber and this Respondent) instead of outside of such spring and immediately surrounds the upper end of the upper part of the guide. * * The hanger's cup-like top (in the K-W absorber, as in Respondent) fits over the top of the coil spring, and, when a shock is received by the wheels, produces precisely

the same action on the spring as does the casing or hanger in the plaintiff's spring. The hangers in the two respective absorbers differ in form, but not in function. * * It would be idle to say that the plaintiff, keeping within the strict terms of its patent, could not put upon the market the same device that the defendants have been making." (243 Fed. 590, 591.)

Infringement.

We have seen by the quotations from the opinions of the learned Judges who have passed on this Thompson patent how they found it to be infringed by shock absorbers in all essentials as to structure and mode of operation like the absorber of this Respondent; while in the case of Petitioner v. Penn. Rubber Company, Judge Westenhaver held this very identical Apco absorber was an infringement of this patent.

See the illustration sheet inserted in this brief. Note the likeness of this Apco device, Fig. 7, to each of the others already adjudicated to be unlawful invasions of Petitioner's rights under this patent.

Former Commissioner of Patents Newton on Infringement.

Note also the finding of former Commissioner of Patents, Hon. James T. Newton, testifying as Petitioner's expert in this suit. He selected several of the claims and says that after examining Plaintiff's Exhibit 2, a specimen of Respondent's absorber, and Plaintiff's Exhibit 3, an illustration of it, he finds (Rec. pp. 148 et seq.):

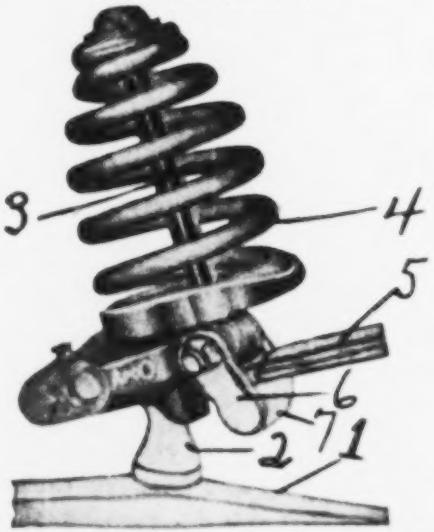
"That defendant's shock absorbers are substantially like the exemplifying structures shown in the patent in suit, the differences being in structural detail and not in matter of substance. I find that defendant's device is like plaintiff's patented structure in organization, mode of operation and result, and that defendant's Apco shock absorbers are identical in construction, mode of operation and result with the 'Apco' shock absorbers held by Judges Killits and Westenhaver to infringe the patent sued on herein in the suit of this plaintiff against the Penn

sylvania Rubber & Supply Co., in the Northern District of Ohio, Western Division. I further state that said Apco shock absorber held to infringe by Judges Killits and Westenhaver are identical in construction, mode of operation and result with the 'Apco' shock absorbers held to infringe the patent sued on herein in the suits of this plaintiff against the L. J. Cooper Rubber Co., in the United States District Court for the Southern District of Ohio, Western Division, and in this suit against the Belknap Hardware & Manufacturing Co., in the United States District Court for the Western District of Kentucky. Judge Sater granted the injunction in the Cooper case and Judge Moorman in the Belknap case.

"Said 'Apco' shock absorbers held to infringe by Judges Killits, Westenhaver, Sater and Moorman and the shock absorbers complained of herein are all correctly illustrated in Plaintiff's Exhibit No. 3.

"For convenience I shall apply several of the claims in suit to defendant's structure, using for that purpose the illustration of defendant's device shown in Plaintiff's Exhibit No. 3. This exhibit states that the shock absorbers are for Ford cars.

Plaintiff's Exhibit 3



"Claim 1 reads:

"'1. In automobile construction, the combination of a non-rotating axle for the ground wheels, of pins or slides attached to and upwardly projecting from said axle, sliding members for said upwardly projecting pins or slides, and a coiled spring interposed between the axle and the sliding member, leaf springs arranged transversely of the car and above the axle and attached at their middle portion to the chassis frame and linked at their outer ends to the sliding members.'

"Defendant's device fully responds to this claim. Its shock absorber is for use on a Ford car, which has a non-rotating axle for ground wheels. In Plaintiff's Exhibit No. 3, the numeral 1 in the left-hand cut, marked 'Front,' indicates the non-rotating axle for the ground wheels, 2 represents the pins or slides (stanchions) attached to and upwardly projecting from said axle, 3 indicates the sliding members (hangers) for said upwardly projecting pins or slides 2, and 4 is the coiled spring interposed between the axle 1 and the sliding member 3 (hanger), 5 indicates the leaf springs arranged transversely of the car and above the axle 1 and attached at their middle portion to the chassis frame and linked (by the links 6) at their outer ends 7 to the sliding members (hanger) 3. The springs of Ford cars are attached at the middle portion to the chassis frame. One of these shock absorbers is mounted near each end of the axle and the leaf springs are supported at their ends by these two absorbers. I find that the defendant's device fully responds to Claim 1, because the organization, mode of operation and result are alike.

"I also find that defendant's device responds to Claim 3 of the patent in suit. It reads:

"'3. In automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to the road wheels, the combination of upright stanchions with the axle of the ground wheels, said stanchions being attached to the outer ends of said axle, leaf springs extending above the axle and between the stanchions,

and supporting the chassis frame, the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame, hangers for the outer ends of said leaf springs, said hangers having vertical movement and being guided therein by said stanchions, and coiled springs interposed between said leaf spring hangers and said axle of the ground wheels.'

"I find that defendant's device also responds to this claim. Referring to Plaintiff's Exhibit No. 3, which illustrates defendant's device, we find 4 in the cut indicates the coiled spring. There is a shock absorber at each end of the axle and hence there are coiled springs and they are used auxiliary to leaf springs, indicated by the numeral 5, for absorbing shock to the road wheels. There are upright stanchions 2 in defendant's device on the axle 1 of the ground wheels, said stanchions being attached to the outer ends of said axle 1. Defendant's device also has leaf springs indicated at 5 extending above the axle 1 and between the stanchions 2. Only one stanchion is shown in the cut, but there is one at each end of the axle. These leaf springs 5 support the chassis frame, and the stanchions 2 are adapted to limit the end motion of the leaf springs 5 and thereby prevent side sway of the chassis frame. I also find in defendant's construction hangers 3 for the outer ends 7 of the leaf springs 5, said hangers having a vertical movement and being guided therein by said stanchions 2, and I find coiled springs 4, there being one at each end of the axle, interposed between said leaf spring hangers 3 and said axle 1 of the ground wheels.

"It will thus be seen that defendant's device is like the structure defined by Claim 3 in organization, mode of operation and result, and that it responds to this claim."

INFRINGEMENT

"I file herewith, and mark Plaintiff's Exhibit No. 5, a photostatic print of Plaintiff's Exhibits Nos. 3 and 4. This Exhibit No. 5 is identical with Plaintiff's Exhibit No. 7, on the injunction motion, in the suit of this plaintiff against the Pennsylvania Rubber & Supply Co., in which Judges Killits and Westenhaver held the patent sued on herein to be infringed by the 'Apco' shock absorbers, which shock absorbers are identical in construction, mode of operation and result with 'Apco' shock absorbers of the defendant herein."

Referring to the similarity of the K-W absorbers, found to infringe the Thompson patent by the Sixth Circuit Court of Appeals (243 Fed. 590), Mr. Newton correctly testified thus:

"Defendant's said 'Apco' shock absorbers are shown in Plaintiff's Exhibit No. 3 and The K-W Ignition Co. absorber is shown in Plaintiff's Exhibit No. 4. This K-W absorber was held to infringe plaintiff's patent in suit by the Court of Appeals for the Sixth Circuit in the suit of this plaintiff against the K-W Ignition Co. Lines have been drawn from defendant's shock absorber to the corresponding parts of the K-W absorber. These absorbers are the same in construction, mode of operation and result. Reference numerals corresponding to those applied to the left-hand cut in Plaintiff's Exhibit No. 3 have also been applied to this cut of the K-W device in Plaintiff's Exhibit No. 5.

"It will be seen from Plaintiff's Exhibit No. 5 that in both defendant's device and the K-W infringing device there are the upright stanchions *2* on the axle 1 of the ground wheels, said stanchions being attached to the outer ends of said axle 1. Both absorbers also have the leaf springs 5 extending above the axle 1 and between the stanchions *2*. In Plaintiff's Exhibit No. 3 and Plaintiff's Exhibit No. 4, as also in Plaintiff's Ex-

hibit No. 5, only one end of the axle is shown, but in practice an absorber is used at each end of the axle. These leaf springs support the chassis frame, and the stanchions 2 are adapted to limit the end motion of these leaf springs and thereby prevent side sway of the chassis frame. In both structures there were also present the hangers 3 for the outer ends 7 of the leaf springs 5, said hangers having a vertical movement and being guided therein by said stanchions 2. Coiled springs 4, one at each end of the axle, are interposed between the leaf spring hangers 3 and the axle 1 of the ground wheels.

"I have applied Claim 3 of the patent in suit to defendant's device and the K-W device for the purpose of illustrating that both of these devices are alike in organization, mode of operation and result, and that defendant's device responds to this Claim 3, as did the K-W device, which the Court of Appeals held infringed this claim.

"I file herewith, and mark Plaintiff's Exhibit No. 6, a true and correct print of Plaintiff's Exhibit No. 8 on final hearing in the suit of this plaintiff against the Pennsylvania Rubber & Supply Co., in the United States District Court for the Northern District of Ohio, Western Division. This Exhibit 6 correctly represents plaintiff's device and all of the devices that have been involved, and that have been held to infringe, in the various suits on the Thompson & Thompson patent No. 1,072,791, sued on herein. I have compared Plaintiff's Exhibit No. 6 with the devices heretofore held to infringe the patent sued on herein, and this Exhibit No. 6 correctly illustrates such infringing devices. Fig. 7 of this Exhibit No. 6 correctly illustrates the 'Apco' device involved in the suit against the Pennsylvania Rubber & Supply Co., and in the suits against the I. J. Cooper Rubber Co., and the Belknap Hardware and Manufacturing Co., and correctly represents the 'Apco' device of the defendant herein. Judges Killits, Westenhaver, Sater and Moorman, in the suits against the Pennsylvania Co., the Cooper Co., and the

Belknap Co., held the 'Apco' device shown in Fig. 7 to be an infringement of the patent sued on herein.

"Plaintiff's Exhibits Nos. 3, 4, 5 and 6 herein are identical with Plaintiff's Exhibits Nos. 3, 4, 5 and 6, respectively, in the Cooper and Belknap suits. Plaintiff's Exhibits Nos. 3, 4 and 5 herein are identical with Plaintiff's Exhibits Nos. 4, 6 and 7, respectively, on the injunction motion in the Pennsylvania suit, while Plaintiff's Exhibit No. 6 herein is identical with Plaintiff's Exhibit 8 on final hearing in the Pennsylvania suit heretofore referred to."

For a reply to the Dyer affidavit, pointing out errors in it, see Ex Commissioner Newton's lucid testimony, pages 153 to 159, of the Record.

Justice Clarke on Infringement.

In speaking of the defendant's device in the suit against the K-W Company, Mr. Justice Clarke on the question of infringement said:

"This shock absorber manufactured by the defendant has been introduced in evidence, and it seems very clear that in organization, mode of operation and result, it is in substance the same combination as that of the plaintiff's patent, and that it therefore infringes it." (See Fig. 3 of the folder inserted herein.)

The Court will note that this K-W absorber is in substance the same in arrangement and in parts, and resulting mode of operation, as the absorber of this Respondent. Both of these absorbers have been claimed by their makers to be made under the Stoltz patent—so claimed by the K-W Co. and this Respondent.

Sixth C. C. A. on Infringement.

Then referring to the K-W absorber and its infringement of Petitioner's patent, this Court of Appeals said it was "strikingly like that of plaintiff's".

adding that the K-W "hanger which acts on the torsion spring **is inside instead of outside of such spring,**" which is the fact also in this Respondent's absorber. Speaking of the K-W absorber, the Court said:

> "The hanger's cup-like top fits over the top of the coiled spring, and when a shock is received by the wheels, produces precisely the same action on the spring as does the casing or hanger in the plaintiff's spring. The hangers in the two respective absorbers differ in form, but not in function. The springs in a Ford automobile equipped with defendant's device receive shocks in the same order, operate in the same manner, and produce the same results as those in a Ford car on which the plaintiff's springs are used." * * *
>
> "It would be idle to say that the plaintiff, keeping within the strict terms of its patent, could not put upon the market the same device that the defendants have been making." * * *
>
> "The judgment of the trial court is affirmed. * * *" (P. 591.)

In the opinion of the Court of Appeals on the accounting, Judges Knappen, Denison and Donahue, 283 Fed. 873, 875, again said:

> "The device of plaintiff's patent is specially adapted for attachment to Ford automobiles. (So also with Respondent's absorber.) Its availability is such that the owner of a Ford car, without the services of a mechanic and without disturbing the operation or construction of the car, may, with slight instruction, remove the usual hanger which supports each end of each leaf spring and insert in its stead the plaintiff's attachment. * * *" (All of this applies equally to Respondent's absorber.)

Then referring to the construction of the K-W absorber, that Court said:

> "The hanger which acts on the coiled spring is thus inside instead of outside the coiled spring, (so also in Respondent's device), but produces the

same action thereon as does the casing or hanger of plaintiff's spring. Apart, at least, from the so-called 'dash pot' and the radius link later referred to, there is thus a mere reversal of parts. The hangers in the two absorbers differ in form, but not in function." (All this is true of Respondent's absorber also.)

Judge Westenhaver on Infringement.

Then referring to the Forest City absorber, illustrated in Fig 5 of the inserted exhibit sheet post, (which we ask this Court to turn to and observe in reading Judge Westenhaver's findings), Judge Westenhaver further said:

"I am of the opinion that defendant's construction is an infringement. This obviously was Judge Clarke's view when he granted the preliminary injunction and seems then to have been the view of defendant's counsel." * * *

"The close similarity of defendant's absorber to plaintiff's is apparent at a glance. It has a stanchion or support at one end adapted to fit in the hole in the axle or brake flange to support the torsion or spiral spring, and to limit the side movement of the leaf springs. (Likewise in Respondent's absorber.) It has also a hanger, having vertical movement and guided by the stanchion or support. (Again likewise in Respondent's device.) The leaf spring of the automobile when the bracket is mounted on the axle is connected with the hanger, and the torsion or spiral spring is supported in the stanchion above the axle, and is itself supported by the hanger. The shocks from the automobile wheels are first received by the torsionspring and are either wholly taken up by it or are modified and diminished before they reach the leaf spring, through which, if at all, they are communicated to the car body. (So also with Respondent's absorber.) Not only are the operating parts similar, but the mode of operation is similar. Both combinations depend on two kinds of springs, one the quick-acting tor-

sion spring, and the other, the slow-acting friction-restrained leaf spring. These springs vibrate out of synchronism. The order in which the shocks are received and absorbed, and the limitation or control upon the side sway or lateral movement of the vehicle are essential features of plaintiff's device, and are the ones to which its success is perhaps mainly attributable. Defendant's device not only receives and absorbs the shocks in the same order, but limits and controls the side sway of the vehicle. This limitation and control of movement is obtained in plaintiff's patent by means of a shackle link and in its commercial form with the addition of a radius link, and the vertical movements of the hanger accommodate the extension and contraction of the automobile springs. (All of this applies equally to this Respondent's absorber.) Defendant's device differs in that the aperture, through which the hanger operates, so as to accommodate but limit the extension and contraction of the leaf springs, is enlarged, permitting the hanger and casing to be tilted, and is supported by a ball bearing joint."

"Notwithstanding these changes, the same function is performed and the same result is realized thereby as by the shackle link. They may do so in a somewhat different manner, but the changes are colorable merely and do not produce a new and different combination, nor avoid infringement."

Such have been the unanimous opinions of the Judges and Courts in the Sixth Circuit, which for reasons of public policy ought to have been accepted by the Courts of the Fifth Circuit as to all of Thompson's claims.

Thus the weight of judicial opinion respecting the interpretation of the claims of the Thompson patent preserves the property rights this patent embodies, and makes the Government grant effective, as against the narrow and destructive restrictions placed upon the patent and its claims in the opinion of Judge Bryan

of the Court of Appeals for the Fifth Circuit.

That opinion, unhappily for the property rights of Petitioner, apparently does not have the vision of the actual invention made as an organization in which the heart and core of the conception exists in the co-ordination of the rapidly vibrating coil spring and the slow-moving leaf spring, with the former interposed between the axle and the leaf spring, and both combined with a stanchion or support for the coil spring, and a hanger between the coil spring and the leaf spring. But instead, that opinion, forgetting or overlooking this embodiment, wandered off to the form of Claim 3 and to the narrow idea that the invention was limited to guiding the hanger by a sliding contact with the stanchion. (Rec. 275, middle of third paragraph; Rec. 276, last paragraph.) Again, the opinion of Judge Bryan urges that the guiding of Respondent's hanger rod which is supported by the coil spring and has a connection at its lower end with the leaf spring by the radius link introduces, somehow, something "essentially different from the sliding hanger," to which he limits the patent. **Here that opinion as to his matter is in direct opposition to the weight of the judicial findings respecting this patent in which the Court of Appeals for the Sixth Circuit found that the K-W absorber was an infringement notwithstanding that that absorber had its hanger guided at its lower end by the radius link—the link that guides the lower end of the hanger to the stanchion.** The presence of the radius link in the K-W absorber did not influence the Sixth Circuit Court of Appeals from holding that absorber to be an infringement.

And when the accounting questions were before it, the Court also said:

> "Apart, at least, from the so-called 'dash pot' and radius link later referred to, there is thus a mere reversal of parts. The hangers in the two

absorbers differ in form, but not in function." (283 Fed. 873, 875.)

Certiorari.

The K W Ignition Company filed a certiorari petition in the Supreme Court of the United States praying for a review of the decision of the Court of Appeals for the Sixth Circuit with reference to the accounting. The Supreme Court denied the petition. (260 U. S. 746.)

Radius Link.

The radius link in the K W absorber, which is precisely like the radius link in the Apco absorber, both of which perform the same function, that of guiding the hanger which occupies a position within the coil spring, was urged in said petition as a reason for apportioning the profits made by the defendant, on the ground that some part of the profit should be attributed to the radius link. **But the radius link was and is without function by itself, and was and is only a substituted form of guide for the hanger of the absorber which had always had a guide under the Thompson patent.** The certiorari petition was denied, as stated above.

And the decision of the Court of Appeals for the Fifth Circuit in the case at bar was not only in conflict with the holdings of the Court of Appeals of the Sixth Circuit, but in conflict also with its own holding in Reed v. Hughes Tool Co., 261 Fed. 192. In that case the Fifth Circuit Court of Appeals held that an added feature in the nature of an improvement did not relieve the defendant from infringement. In the present case, it treated the added radius link in a contrary way by making the addition of it an avoidance of infringement.

In the Reed case, the Fifth Circuit Court of Appeals said:

3
5

"Coming to the question of infringement, we think that the Reed Drill (defendant's device) was substantially identical in structure and function with the drills of the patent in suit. * * * The Reed drill has an **improvement upon the drills disclosed by the patents in suit,** * * * It is conceded that this **constitutes an improvement upon the drills covered by both** the Griffin and the Hughes patents. It is also true that a patent has been issued to Reed to cover this improvement. The Reed bit, however, appropriates for the base of this improvement the invention of the patents in suit."

"The law is settled that an improver cannot appropriate the invention of his predecessor, who has obtained a patent, as a base for his improvement, without the consent of the patentee, and without infringement, even though the improvement has become the subject matter of a patent." (Page 194.)

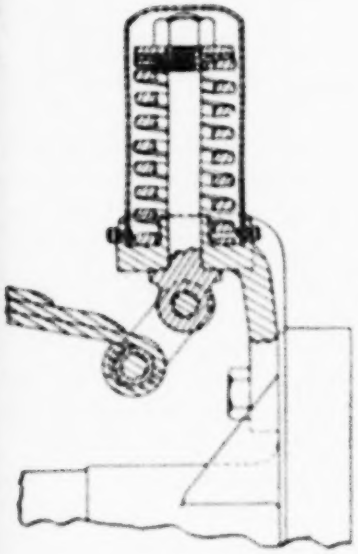
In conclusion, on the present infringement, we again submit that not only is Respondent's absorber a perfect embodiment of the Thompson invention, part by part—stanchion, coil spring on the stanchion, hanger supported by the coil spring, leaf spring connected to the hanger, with the coil spring first receiving the shocks from the axle, absorbing the minor shocks and reducing the major shocks before they reach the leaf spring, all in exactly the same manner as in the Respondent's absorber—but Respondent's absorber, radius link included, is like the other absorbers held to infringe, as seen in Figures 1, 2, 3 and 5 of the illustrated-sheet inserted opposite this page, all of which, except the Forest City absorber (Fig. 5 on said sheet), had the radius link.

Patentee Storrie's Admissions.

Mr. Storrie, patentee of the Storrie Patent No. 1,279,035, under which Respondent claims it is operating (a patent now owned by Mr. Keller, of counsel

FIG. 1

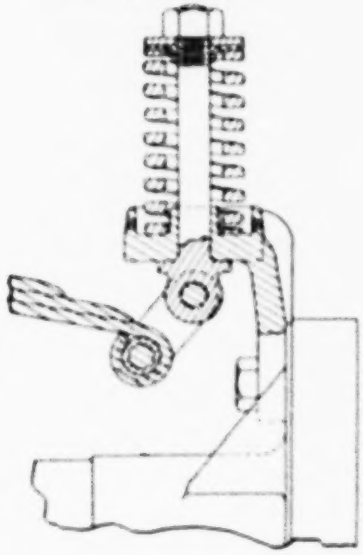
HALLADAY CONSTRUCTION-
HELD BY THIS COURT
AN INFRINGEMENT.



FROM HALLADAY
CABE.

FIG. 2

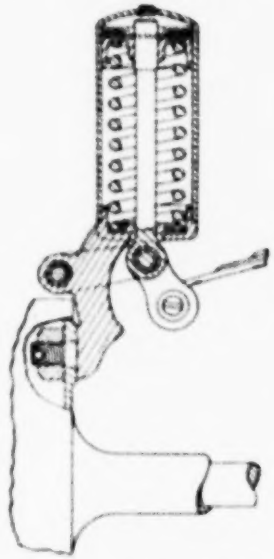
SAME AS FIG. 1 CASING
REMOVED C.C.A. 6TH
CIR. 243 FED. 590.
SAYS PRESENCE OF
CASING IMMATERIAL.



FROM HALLADAY
CASE

FIG. 3

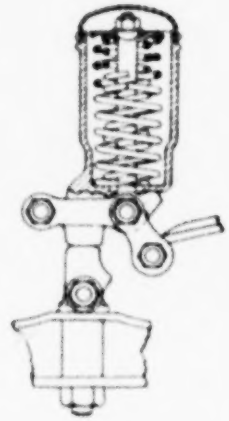
K.W. IGNITION CO.,
TYPE FOUND INFRIN-
GEMENT WITH OR WITHOUT
CASING 243 FED. 590



FROM K.W
IGNITION CO, CASE
MAIN RECORD P. 181

FIG. 4

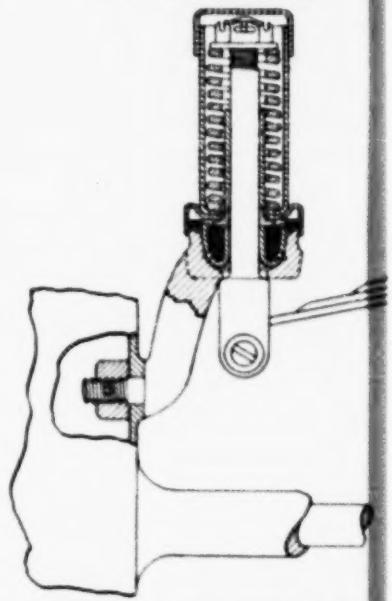
ONE OF TEMPCO, FORMS
WITHIN PATENT IN K.W.
CASE C.C.A. 243
FED. 588



FROM K.W.
IGNITION CO, CASE
MAIN RECORD P. 197

FIG. 5

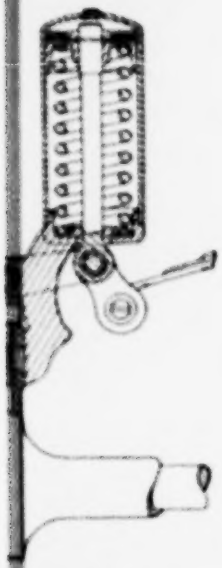
COMPLAINANT'S INFR-
INGEMENT ILLUSTRATION
DEFENDANT'S ATTACHMENT
FOREST CITY CO.



FROM FOREST CITY SUIT-
HELD INFRINGED.

FIG. 3

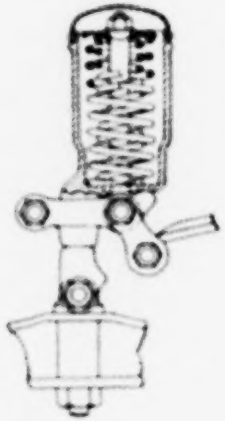
IGNITION CO.,
FOUND INFRIN-
ENT WITH OR WITHOUT
243 FED. 590



ROM K.W
ION CO, CASE
ECORD P 181

FIG. 4

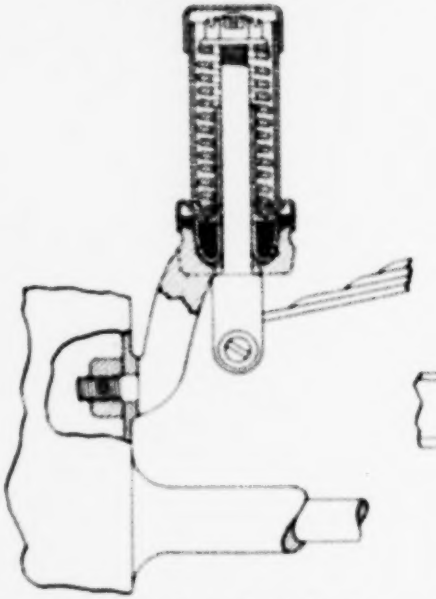
ONE OF TEMPCO, FORMS
WITHIN PATENT IN K.W.
CASE C.C.A. 243
FED. 588



FROM K.W.
IGNITION CO, CASE
MAIN RECORD P 197

FIG. 5

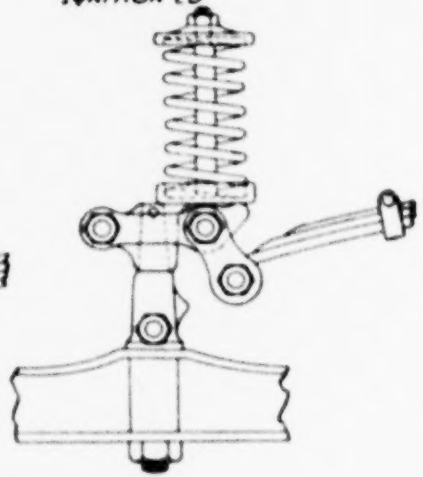
COMPLAINANT'S INFR-
INGEMENT ILLUSTRATION
DEFENDANT'S ATTACHMENT.
FOREST CITY CO.



FROM FOREST CITY SUIT-
HELD INFRINGED

FIG. 6

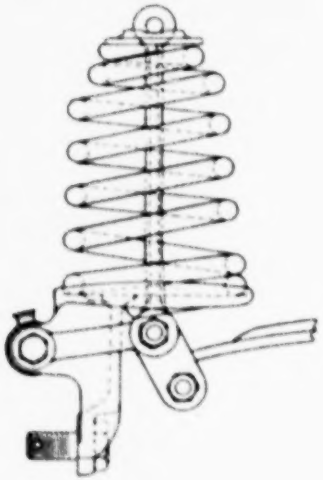
ORIGINAL THOMPSON
ABSORBER WITH LINK
AND WITHOUT CASING
COPIED BY K.W.
IGNITION CO.



FROM K.W IGNITION CO.
CASE MAIN RECORD P 199

FIG. 7

APCO PRESENT TYPE.
ADDED RADIUS LINK LIKE
K.W. AND REMOVED COVER
C.C.A. 6TH CIR., HOLDS
DOES NOT AVOID INFRINGENENT.



APCO CASE.

for Respondent Rec. 21), was a witness for Respondent. Among the things he admitted those appearing below bear on the question of infringement, because he conceded that the coil spring and the leaf spring in Respondent's absorber operate in the same coordinated manner as in the Thompson patent; and because he conceded that the radius link is a guide to the lower end of the hanger rod which is supported by the coil spring, and thus constituties a guide even of the modified form, or by way of an addition to the particular embodiment of the Thompson device illustrated in the patent.

In other words, in the patent, a stanchion in that form of embodiment, guides the hanger; while in the K-W absorber, in one form of Petitioner's absorber and in Respondent's absorber, the radius link was pivoted to the stanchion and to the hanger to form the immediate guide for the hanger, but even in such case the stanchion was the element from which the hanger was guided and which made it possible to use the radius link.

So in all of the forms of absorbers here referred to, the stanchion was the ultimate guiding element for the hanger, whether the link was interposed or not.

It is also true that the K-W Ignition Co., the defendant in the case before the Court of Appeals for the Sixth Circuit (283 Fed., 873, 870) held a license under this same Storrie patent under which it endeavored to justify itself. But that fact did not relieve the K-W absorber from the charge of infringement.

Recurring now to the admissions of Storrie, we quote the following from his testimony:

> "Should the radius links be done away with, the lower end of the depending link passing through the spring when deflected would have to have some controlling element to keep it in a vertical position, seeing that we have no guiding ele-

ments other than the spring itself. I refer to the coil spring, to maintain true position." (Rec. 62, near top.)

"In Exhibit 2 (defendant's) the spring and radius links retain the spring center line 5 [the hanger] in a vertical position when it moves down from the position shown." (Rec. 81, near bottom.)

"The radius links are pivotal on stanchion 2." (Rec. 62, near middle.)

"CQ. What was the relationship of the coil spring to the leaf spring in this combination?

"A. The relationship was such that shocks would be neutralized by the coil spring before they would go on to the leaf spring in this arrangement of parts." (Rec. 63.)

Respondent has pretended that the bee-hive form of its coil spring in some manner differentiated its absorber from the Thompson patent. But Storrie, on cross-examination, testified that the net results are the same whether a cylindrical coil spring or a bee-hive shaped coil spring be used. He was asked if there was any difference between these two forms of springs in the net result of the operation of the absorber, and answered:

"A. The net result of Defendant's Exhibit No. 1 (showing Storrie absorber with cylindrical form of coil spring) and Defendant's Exhibit No. 2 (showing Apco absorber with bee-hive form of coil spring) are the same." (Rec. 64.)

Again, on cross-examination, he was asked and answered:

"CQ. 297. But for practical purposes the net result to the car and the passenger during the operation of these two structures will be the same?

"A. If you wish to speak generally, I would say yes." (Rec. 77.)

These admissions of Storrie eliminated all pretended

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differences in the net results as between a cylindrical form of coil spring shown in the Thompson patent—**though the claims are not limited to any such form of such spring**—and the bee-hive form of coil spring, which are optional in the general combination. These admissions are enough, standing alone, to establish the mechanical equivalency of the Apco absorber and that of the Thompson patent as defined and applied by the Courts in the K-W case.

Craig's Testimony—Craig, a Mechanical Engineer Testifying as an Expert. (Rec. 24, et seq.)

In rebuttal by the Petitioner, the following facts were established by his testimony, which was based on actual spring tests made in his capacity as an engineer, without any interest in the controversy.

(1) That helical springs have the same action, and the same adherence to Hook's law, whether they are cylindrical or straight-sided coil springs or bee-hive shaped coil springs; and that a leaf spring is different in action from these torsion springs.

(2) That Craig's tests proved that the bee-hive spring had the same action of compression that the straight-sided coil spring has.

(3) That in Respondent's absorber, the radius link is a part of its stanchion and acts to guide the hanger just as Thompson uses his stanchion to guide the hanger, because in both cases the hangers are free elements resting at their tops on the coil springs and are guided at their lower ends by the stanchion, whether the guiding is effected by a link, such as a radius link, or by a sliding contact, such as shown in the Thompson patent representing one embodiment of the invention.

The Court will find the Craig testimony illuminating because it describes his experiments and sets forth how the photographs he produced picture the parts of

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the absorber under the conditions of the test.

He also testified that the model produced by Respondent was not a fair representation of Respondent's device because it did not correctly represent the actual construction of the Ford car; and that while you could move with your fingers the absorbers on the model laterally and pivotally, you could not so move them when they were hooked up at the exact dimension of the leaf spring found in the Ford car, where they were under the load of the body and engine.

Georgia District Court's Injunction Opinion.

In its opinion on the injunction motion, the Court said:

> "* * * But my opinion agrees with that apparently entertained in the Patent Office that it (the absorber with the Storrie radius link added) is at least no infringement of Thompson's patent which includes in place of it the sliding device." (Rec. 194.)

The statement here made that the Patent Office entertained an opinion that there was "no infringement of Thompson's patent," is founded on a wholly erroneous impression. The Patent Office does not decide questions of infringement.

All the Patent Office did in allowing the Storrie patent was to adjudge that the radius link was a specific structural addition to the Thompson patent which it cited in its official actions on the Storrie application, as showing all was old in the Storrie device save only the addition of the radius link, the patentability of which addition it was questioning. (See Storrie's file wrapper, Appellee's Exhibit No. 21.)

From all that has been submitted above, it is manifest that Respondent's absorber, like the K-W absorber before the Court of Appeals in the Sixth Circuit, is an infringement of all of the claims of the Thompson patent, because Respondent's absorber has

all of the elements of the Thompson invention, in the same relation, save only the addition of the radius link.

On this question of infringement by the Apco shock absorber, we quote the pertinent holdings of this high Court in Winans v. Denmead, 15 How. 330:

> "It is generally true, when a patentee describes a machine, and then claims it as described, that he is understood to intend to claim, and does by law actually cover, not only the precise forms he described, but all other forms which embody his invention; it being a familiar rule that, to copy the principle or mode of operation described, is an infringement, although such copy should be totally unlike the original in form or proportions."
>
> "Where form and substance are inseparable, it is enough to look at the form only. Where they are separable, where the whole substance of the invention may be copied in a different form, it is the duty of Courts and juries to look through the form for the substance of the invention—for that which entitled the inventor to his patent, and which the patent was designed to secure; where that is found, there is an infringement; and it is not a defense, that it is embodied in a form not described, and in terms claimed by the patentee."
>
> "And, therefore, the patentee, having described his invention and shown its principles, and claimed it in that form which most likely embodies it, is, in contemplation of law, deemed to claim every form in which his invention may be copied, unless he manifests an intention to disclaim some of those forms."

ustice Clarke on Prior Art.

As to the prior art or what existed prior to the Thompson patent, Mr. Justice Clarke further said:

> "The patents introduced in evidence make it clear enough that, for a considerable time before the date of the Thompson invention in suit, there was a very general effort among inventors to discover means of relieving the jolting occasioned by motor cars moving at high speed over rough

streets and roads, none of which served the purpose intended nearly so well as the patented device in suit, especially in the cars to which the latter are best applied. And while the construction of the patent in suit is made up of well-known elements, yet they are combined in a manner so different from any combination that preceded it, that the immediate adoption of it by the general public is very persuasive evidence that it possesses that novelty and merit which lift it to the level of invention." (Rec. 283.)

Court of Appeals on Prior Art.

Referring to the several prior art patents cited by the Respondent in that case, the Court of Appeals further said:

> "The shock from the wheels passes through the leaf-spring first. The coiled spring is not between the axle and the leaf-spring, and no one suggests how, within the terms of the patent (prior patent), a construction is permissible or possible thus to place it. The result which he (a former patentee whose patent was relied on as a defense) obtains and his manner of obtaining it are not the same or substantially the same as those secured and employed by Thompson. * * * The remoteness of the other alleged anticipatory patents is such that they need not be mentioned. * * *" 243 F. 588, 589

Judge Westenhaver on Prior Art.

Judge Westenhaver in Temco v. Forest City, in his opinion sustaining the validity and the charge of infringement of the Thompson patent said:

> "The defenses are the usual ones of invalidity for lack of novelty and lack of invention and non-infringement. * * * Ignoring the specific prior use, the validity of plaintiff's patent is not now open to question. It was upheld by this Court, Judge (now Mr. Justice) Clarke delivering the opinion, and his decision was affirmed on appeal. * * * An examination of the record

in that case (the K-W case) discloses that all the patents pleaded and relied on herein as anticipation were all introduced in evidence. Six new patents only not set up in the answer as a defense or anticipation have been introduced on this hearing. They are available only as showing the state of prior art. Of these the one most relied on is No. 761,353 to J. A. Brill and W. S. Adams. This patent is for a suspension spring on a car truck and is clearly more remote in the art than others presented and relied on as an anticipation and held insufficient as a defense by the Circuit Court of Appeals. * * * Furthermore the validity of this patent was sustained by Hon. John M. Killits in a suit brought by the present plaintiff against the L. P. Halladay Company in the Western Division of this District. Upon this state of facts the validity of plaintiff's patent must be taken as conclusively established."

So also as to the prior art set up in the present case in support of the defense of invalidity of the Thompson patent, this has been judicially determined to be art insufficient to defeat this patent.

The prior patents now set up are only three in number, namely, British patent to Bussing, No. 3,385; French patent to Peugeot, No. 418,997; and French patent to Cosset, No. 441,832.

In the K-W Ignition case, 50 patents were set up in defense against the validity of the Thompson patent; and in the Forest City case, 22 patents were so pleaded.

Bussing English Patent Now Cited Same as Bussing French Formerly Cited.

Among those 50 patents in the K-W case was **the French patent to the same Bussing, No. 374,364, showing identically the same device as shown in the British Bussing patent.** In legal effect, therefore, Mr. Justice Clarke and the Court of Appeals had before them this British Bussing patent and found it insufficient. That

it is, needs no argument. Both the Bussing English now cited, and the Bussing French then cited, being duplicates, show the leaf-spring mounted on the axle and the coil-spring connected to the chassis frame—the very arrangement which Thompson turned his back on and did not and could not follow in making the Thompson shock absorber. **Nor does Respondent make its Apco shock absorber like the Bussing patents.** Stare decisis again applies.

Peugeot French Patent.

The Peugeot patent, now cited, is not different in effect from the Lefevre patent, No. 430,135, and the Rimailho patent, No. 30,419, both cited in the K-W case. (Plaintiff's Exhibit 14, K-W Record, p. 12.) In Peugeot the leaf-spring is on the axle and the coil-spring is pressed upon by the chassis to support the chassis.

Lefevre Patent.

Likewise in the Lefevre patent the leaf-spring is on the axle and the coil-spring is pressed upon by the chassis to support the chassis; while in both, the coil-spring is suspended from the leaf-spring, and does not, and cannot, receive the shocks **first.**

Rimailho Patent.

Likewise in Rimailho, the leaf-spring is supported by the axle, and the coil-spring is pressed down by the chassis to support the chassis, while the coil-spring is suspended from the leaf-spring, and cannot **first** receive the shocks, as in Thompson's co-ordination of the springs.

So that the Peugeot patent presents nothing that was not before the Courts in the K-W case where the Lefevre and Rimailho patents were set up in defense.

Cosset French Patent.

In Cosset the leaf-spring is also to be carried by the axle, the coil-spring is pressed down by the chassis to

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support the chassis and the coil-spring is suspended from the leaf-spring just as in the Lefevre and Rimailho; another failure to get Thompson's co-ordination and result.

And besides, untried suggestions and mere picture proposals embodied in foreign patents without proof that they had ever come into actual use, do not carry conviction and are not to be used to defeat patents for inventions of great commercial utility and value, unless indeed they are perfect anticipations beyond question.

> Hanifen v. Godshalk, 84 Fed. 649 (C. C. A. 3).
> Selectasine v. Presto-O-Graph, 267 Fed. 840.
> General Electric v. Hoskins, 224 Fed. 464, 468 (C. C. A. 7).

There is nothing, therefore, of merit or anything anticipatory in these stale citations of the Bussing, Peugeot and Cosset patents.

Edwards Absorber.

Apparently Respondent has tried to make capital out of the fact that the Petitioner's subsidiary or licensee, Edwards Brothers Company, has lately promulgated an additional type of shock absorber. But the Court will find that this absorber merely contains an additional coil spring for preventing the rebound of the auto body when it recoils from a shock.

To accommodate this inner spring the base of the outer spring had to be enlarged in diameter—a matter of degree, not of principle. In this way the yoke which extends between the two springs was given sufficient space; and the yoke was permitted to be spread apart enough to receive the inner spring.

This is the Thompson absorber plus a snubbing spring. The addition of this snubbing spring does not at all in any manner whatsoever militate against the legal rights of this Petitioner. A mere added feature

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for a further function does not take anything away from the patentee's rights under his original patent.

Question of Estoppel of Respondent as Licensee Under K-W Ignition Co.

According to the deposition of Storrie, he executed a mortgage to the K-W Ignition Company covering his invention and the expected patent while Storrie's application was still pending in the Patent Office. The amount loaned Storrie by K-W was $2,000.00. Storrie failed to repay it and K-W took over the title and licensed Storrie to sell absorbers under the patent. Later Storrie obtained the consent of the K-W Company to transfer or extend his license to the Respondent. That was prior to the institution of this suit.

Now, Mr. Keller has taken the witness stand (Rec. 21) and testified herein that he has lately acquired the legal title to the Storrie patent from K-W, but subject to a reserved license K-W retained and subject to the old existing license in the Respondent, obtained from K-W through Storrie.

Thus there is established the relation of privity between the K-W Company and the Respondent with respect to the Storrie patent. The Respondent acquired its license from the K-W Company through Storrie as the channel. This succession or privity of rights under the Storrie patent puts this Respondent in respect to its attempted defense under the Storrie patent in the shoes formerly occupied by the K-W Company in its unsuccessful attempt to set up a defense by virtue of its ownership of this same patent. And this retention by the K-W Company of license rights under the Storrie patent, as testified herein by Mr. Keller on behalf of this Respondent, shows that the K-W Company still is endeavoring to profit in some manner under this patent, notwithstanding that the shock absorber which this Storrie patent discloses has long

since been adjudicated to be an infringement of Petitioner's Thompson patent, and as to which the K-W Company has long been under a final injunction; and has paid a final judgment of punitive damages and reasonable royalty amounting to $292,938.26. (283 Fed. 873.)

Again, as the K-W Company is under this final decree of infringement and injunction, this relation of privity established by the relation of licensor on the part of K-W and licensee on the part of this Respondent, would seem to create an estoppel, certainly an equitable estoppel, against the Respondent in respect to its denials that its Storrie absorber is an infringement of the Thompson patent.

Then we have Mr. Keller, formerly counsel for the K-W Company in this litigation under the Thompson patent, and now counsel in the like litigation against the Respondent, this licensee, of the K-W Company, going on the witness stand in the presence of the lower Court and testifying as stated above, that he had acquired from the K-W Company the Storrie patent, subject to the reserved license in the K-W Company and subject to the license from the K-W to this Respondent.

From all these circumstances three conclusions are manifest:

(a) That the relationship of privity exists between this Respondent and the defendant in the former litigation in the Sixth Circuit, which creates an equitable estoppel against indulging the present Respondent in relitigating in this Court the same questions that were formerly litigated by this Respondent's licensor respecting the validity of the Thompson patent and its infringement by the K-W absorber which mechanically is the full equivalent of this Storrie absorber. Mr. Storrie testified that whether the absorber is made with a bee-hive shaped coil spring or a cylindrical

coil spring, it is in either case within and covered by the Storrie patent. (See his testimony, p. 85 Rec.)

(b) That this resistance by this Respondent to the validity and infringement of the Thompson patent is not only in its own interest, but is also in furtherance of a service to the K-W Company for the license it gave without consideration, as Storrie testified, all in the hope that in this manner an adjudication may now be had contrary to the numerous adjudications in the Sixth Circuit, which might enure to the benefit of the Respondent's existing licensor, the K-W Company.

(c) That aside from this element of estoppel the wisdom and propriety of this Court following the decisions of the other Courts, and that in particular of the Court of Appeals in the Sixth Circuit, are manifest in order that there may be an end now to litigation over the same subject-matter and between the same parties or their privies. Certainly under these circumstances, having in view the hardships again being borne by this Petitioner, there should have been no hesitation on the part of the District Court and the Court of Appeals below in following the solemn final adjudications of like Courts in the adjoining circuit.

Summary Commercial Career Thompson Absorber.

In the testimony of Mr. Edwards, one of the original organizers and large owners of Petitioner, he states:

> "* * * They [these absorbers of Petitioner] have been continuously sold to the extent of two and one-half million dollars. For over a year these shock absorbers were manufactured and sold precisely like the drawings of the patent in suit, with a net profit of $100,000. That in order to make the absorbers more economical for production manufacture, the present embodiment was adopted, such as shown in the attached exhibits, 19 and 20. A sample of the K-W Ignition Company shock absorber, which was held to in-

fringe the present patent in suit, is marked Plaintiff's Exhibit 21, while a sample of the absorber as originally made during the first year—out of which $100,000 profit was made, is marked Plaintiff's Exhibit 22.

"During the first year of this manufacture of shock absorbers, out of the number of sets between 13,000 and 14,000, there were only about $700.00 worth of repairs, so that the shock absorbers were substantially perfect (record, page 136, Temco v. K-W Ignition, Plaintiff's Exhibit 14).

"We have never changed our design, save for adapting it to more ready commercial manufacture in large quantities, and the statement that we copied the Storrie design or any other is false." (Rec. 214.)

He further testified:

"That the K-W Company sold approximately 66,000 sets in all and the Temco Company 68,000 sets; that the 13,000 sets that were manufactured by the Temco Company and sold by the K-W Company are included in the 68,000 sets, so that the Temco Company has manufactured in all up to and including the year 1923 approximately 54,000 sets" (besides the 66,000 infringing sets made and sold by the K-W Company). (Rec. 239.)

In this connection the Court will be further informed on the commercial significance of this invention by reference to the decision of the Court of Appeals for the Sixth Circuit on the Accounting between this Petitioner and the K-W Company, in which $292,938.26 was awarded. (283 F. 873.)

Such an imposing recognition by the public of the novelty and utility of the invention as testified to by Mr. Edwards conclusively shows the benefit the patentees have conferred upon the public and affords cogent reasons for judicially awarding them and their assignees a decree which will protect their property rights.

The mere later issuance of the Storrie patent is evi-

dence only of a small patentable addition due to the specific added feature, and is not evidence of lack of infringement of the earlier patent, a rule broadly recognized and applied. Herman v. Youngstown, 191 Fed. 579, Court of Appeals for the Sixth Circuit; also Gordon v. Torco-Halvah, 247 Fed. 487, by the C. C. A. for the Second Circuit; also Simplex Window Company v. Hauser, 248 Fed. 919, by the C. C. A. for the Ninth Circuit.

In conclusion, it is submitted that as the judgment of the Circuit Court of Appeals for the Sixth Circuit in the K-W case has ripened by the lapse of ten years, 1917-1927, and as the conclusions of that Court as to the validity of Petitioner's patent and its infringement by the K-W shock absorber apply equally to the precisely same construction in elements, arrangement, mode of operation and result, found in Respondent's absorber, Petitioner should now be given the benefit of that adjudication as it applies to the present case.

This we urge with great respect and with a profound sense of Petitioner's mature adjudicated rights, which, as a matter of public policy and in the interest of uniformity of decisions, ought, under the circumstances set forth above, to be made effective and available now for the protection of Respondent's rights.

Respectively submitted,

H. A. TOULMIN,
H. A. TOULMIN, Jr.,
Counsel for Petitioner.

Dayton, Ohio,
1927.

J. J. SPALDING,
H. MacDOUGALD,
J. A. SIBLEY,
Of Counsel for Petitioner.

Atlanta, Ga.,
1927.

No. [illegible] 17

United States Supreme Court

October Term, A. D. 1916

E TESCO ELECTRIC MOTOR CO.,
Petitioner,
—v.—
CO MANUFACTURING CO.,
Respondent.

Of Petition for Writ of Certiorari.

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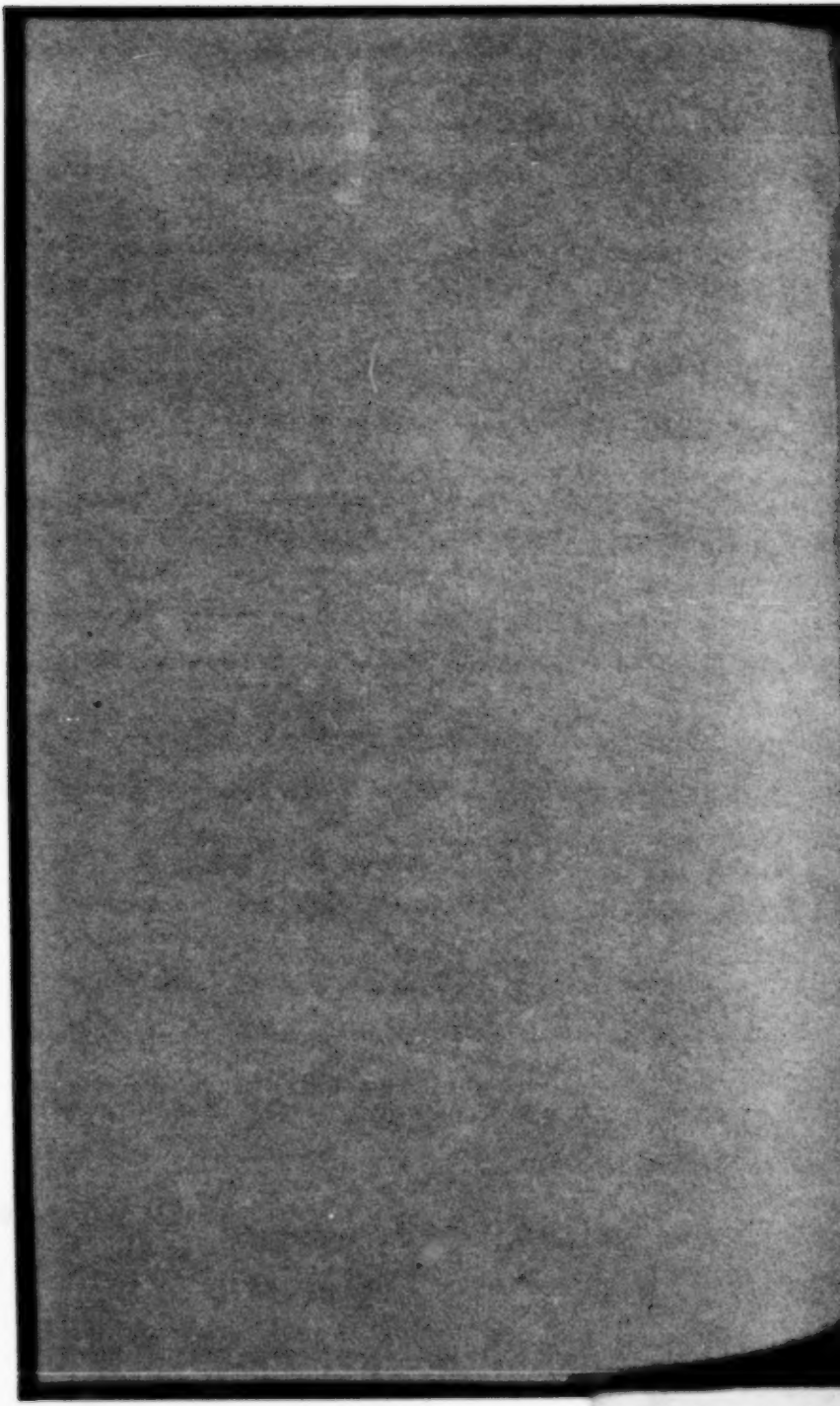
ge Westenhaver's Opinion in The Tesco ric Motor Co. v. Forest City Electric Co.

H. A. TOULMIN,
H. A. TOULMIN, Jr.,
Counsel for Petitioner.



In the United States District Court

Northern District of Ohio
Eastern Division

The Temco Electric Motor Company,
Plaintiff,

—v.—

Leroy A. Westman and
The Forest City Electric Company,
Defendants.

No. 228.
In Equity.

Judge Westenhaver's Opinion

(Filed July 18, 1919)

Westenhaver, District Judge:

The bill herein charges infringement by defendants of United States letters patent No. 1,072,791 issued September 9, 1913, to Ralph P. Thompson and William S. Thompson and assigned by them to plaintiff. The defenses are the usual ones of invalidity for lack of novelty and lack of invention and non-infringement. The specific defense, however, most discussed and to which most of the testimony relates is that of an alleged prior use.

Ignoring the specific prior use, the validity of plaintiff's patent is not now open to question. It was upheld by this Court, Judge (now Mr. Justice) Clarke delivering the opinion, and his decision was affirmed on appeal. See K.-W Ignition Company v. The Temco Electric

Motor Company, 243 Fed. 588. Plaintiff's construction and the reasons why the patent therefor are valid are so fully described and set forth in the Circuit Court of Appeals opinion that reference thereto is deemed sufficient without any further observations by me. An examination of the record in that case discloses that all the patents pleaded and relied on herein as anticipation were all introduced in evidence. Six new patents only not set up in the answer as a defense or anticipation have been introduced on this hearing. They are available only as showing the state of the prior art. Of these the one most relied on is No. 761,353 to J. A. Brill and W. S. Adams. This patent is for a suspension spring on a car truck and is clearly more remote in the art than others presented and relied on as an anticipation and held insufficient as a defense by the Circuit Court of Appeals. Manifestly no new evidence or considerations are now presented not fully weighed and passed on by the Circuit Court of Appeals. Furthermore the validity of this patent was sustained by Hon. John M. Killits in a suit brought by the present plaintiff against the L. P. Halladay Company in the Western Division of this District. Upon this state of facts the validity of plaintiff's patent must be taken as conclusively established.

Passing to the specific defense of an alleged prior use, it becomes difficult to resist the impression that the necessities of the defense are responsible for the setting up of this use. The Circuit Court of Appeals decision was handed down June 8, 1917. The present case had been heard in this Court and a preliminary injunction granted at about the same time as the decree in the K-W Ignition Company case was affirmed. An order had also been made herein that this cause should remain on the docket for trial after the Circuit Court of Appeals had heard and decided the other case. No further proceed-

ings were had, but later in February 1918, defendants appeared by new and different counsel and applied for leave to file an amended answer, setting up this prior use. This application for leave was opposed, plaintiff's counsel urging that the understanding between Court and counsel was that the final decree herein should follow the decision of the Circuit Court of Appeals. But inasmuch as no stipulation in writing was produced authorizing or empowering judgment to be entered in this case, I granted the leave to amend and an amended answer was accordingly filed. Later, in April 1918, a petition and motion supported by affidavits were also filed in the Circuit Court of Appeals seeking leave to file in the District Court a supplemental bill in the nature of a bill of review to the decree of the Court below affirmed on appeal. The leave to amend and the petition for leave to file a bill of review are both based on the same grounds and supported by the same affidavits.

The prior use set up for the first time as a defense is one said to have been developed by the J. M. Shock Absorber Company or by its president, Felix Petitmaire, at Philadelphia and elsewhere. For convenience this use is referred to as the Philadelphia use. On the oral hearing herein another alleged use at Buffalo, New York, known as the Meinhart use, was also brought into the case and will be discussed separately.

Plaintiff's positions with reference to this Philadelphia use are (a) that it is later in date than the Thompson invention; (b) that it was at best an experiment which proved inoperative and unsuccessful and was abandoned; and (c) that in any event it is not the same as the Thompson invention. In my opinion, all of these positions are fully sustained.

Priority is clearly shown to be with Thompson. Concededly Thompson's invention was reduced to practice and installed on a Ford car between the middle and lat-

ter part of June, 1912. The patent was applied for promptly thereafter and steps taken at once to manufacture and sell it. The date of the conception by the Thompsons of their invention is disputed. One says that the conception was made in January 1912, and that a spring and other materials to construct a device in accordance therewith were assembled in February or March and that steps were taken to construct the device subsequently installed in April or May. Prior to January and during the following months until April, the Thompsons were engaged in constructing and installing a rear platform spring suspension on a Ford car. The conception for the patented device was suggested to them during the development of this work by the necessity of having some form of absorber on the front spring to co-operate with the rear platform spring suspension. The other Thompson is less specific and merely says that the conception was made some time in the early spring of 1912 and while developing and constructing the rear platform spring suspension. No drawings, models or disclosure of any kind to third persons of this conception is proved or claimed by the inventors to have been made earlier than the actual development and construction of the device first installed. The Thompsons were wholly disinterested at the time their testimony was taken and their testimony carries conviction. I find as a fact that their conception originated as early at least as the first half of April, 1912.

Defendants have wholly failed to show any date for the Philadelphia use earlier than the latter part of August, 1912. The testimony has been carefully weighed and considered. It is too large to permit of a critical analysis or review, hence I shall content myself with a brief statement of my findings therefrom. I find that Petitmaire did not apply a J. M. absorber to a Ford

car in August, 1911, nor at any time prior to August, 1912; that the work, if any, done by the mechanic Jerabek in helping to adapt a J. M. absorber to a Ford car was not done in August, 1911, but approximately a year later; that it is not true that Petitmaire or the J. M. Shock Absorber Company sold and installed absorbers for Ford cars during the latter part of 1911, and in increasing numbers in the early part of 1912; that on the contrary he obtained his first supply of brackets therefor the latter part of August, 1912, and such sales as were in fact made were not made earlier than September, and during the several months following; that the advertising circular, known as "Exhibit J" was not published and distributed in 1911 or early in 1912, but was, in fact, published and distributed after the first of October, 1912; that the other advertising matter in which shock absorbers for Ford cars were mentioned or described was in the later months of 1912 and none earlier than the latter part of August. There is no sufficient evidence tending to show the conception by Petitmaire of this alleged use at any specific date earlier than its actual production and installation. The evidence raises a suspicion, but is not clear and convincing that he had conceived the idea of installing on Ford cars a J. M. absorber in this was as early as June, but as evidence it is no more clear and convincing than that tending to show January, 1912 as the conception date of the Thompson invention. All the testimony of defendants' prior use is discredited by many considerations. Plaintiff's counsel state these considerations with much force and in strong language, and I regret to say that these criticisms are, in the main, justified.

This alleged use consisted merely in applying type "C" or single cylinder form of J. M. absorber to a Ford car. In order to do so a supporting bracket was de-

signed and fastened to the drum of the rear axle. A type "C" J. M. absorber was placed on this bracket merely in an inverted position, that is, turned upside down from the normal method of installation shown in the Jacquet patent No. 1,015,682, under which this absorber is made and sold. That patent was introduced and relied on as a defense in the K-W Ignition Company case. It was among the patents disposed of summarily in the opinion in these words, "The remoteness of the other alleged anticipatory patents is such that they need not be mentioned." The absorber was mounted pivotally on the bracket and the end of the automobile spring was attached to a bolt below the pivot which passed through the lower jaws of a U-shaped forging. This forging was brazed or welded to the absorber and appears to be of the same shape and form as that shown in the patent drawings and the general advertising matter of the company. Many reasons exist why this construction is not the Thompson invention. It was merely a mechanical performance of turning a J. M. absorber upside down. This operation would naturally suggest itself to any mechanic skilled in the art and might easily be done by him, and it is inconceivable to me that the Circuit Court of Appeals, with the Jacquet patent before them, could or would have summarily dismissed it without weight if merely inverting it produced or anticipated the Thompson invention.

Briefly stated, a few of the differences are: The Thompson invention depends for its success on its rigid mounting and means for limiting the side sway or lateral movement of the car body when in motion, and the means which accommodate the extension and contraction of the automobile springs. These features, the evidence shows, are what determined the difference between success and failure in this type of shock absorber.

The pivotal mounting of the J. M. absorber fails to embody the elements essential to accomplish these results. It must be held not to be the same use, even if it had been shown to have been prior in time.

Furthermore, the evidence clearly shows that the Philadelphia use proved a failure and was early abandoned. This finding is made after duly weighing and considering the testimony of the witness Guenther, and all the testimony as to the socalled Buffalo use. An unlimited and uncontrolled movement, such as exists with the pivotal mounting, is shown to be impracticable, if not inoperative. Such a construction permits the top of the absorber casing to strike against the wheel or fender, and allows an unlimited and uncontrolled sidesway or lateral movement of the car-body when the automobile is in motion. The result was that the Philadelphia use, instead of making riding in a Ford easier, created serious difficulties in steering and holding the car on the road, as well as inflicting damage on the wheel and fender. In Blackledge v. J. M. Shock Absorber Company, 213 Fed. 478 (reversed on another point, 220 Fed. 921) there is an express finding that an absorber which does not limit or control this side-sway or lateral motion is inoperative and a failure.

The evidence clearly shows such to have been the history of this Philadelphia use. A limited number were sold, beginning the latter part of September, 1912. Apparently numerous and repeated complaints began to come in from customers and agents. The advertising thereof was dropped and instructions given to make no further efforts to push or sell the Ford absorber. Apparently the J. M. Shock Absorber Company retired from this field the latter part of 1912, because of the failure of its construction, and practically abandoned its

use. It passed into the category of an abandoned experiment.

The defense in this respect is much discredited by the failure to disclose, if not the deliberate concealment and suppression of these facts, and by the assertions made in the application for leave to amend the answer and to file a bill of review in the nature of a supplemental review, that the construction first devised by Petitmaire was still being used and sold.

Later, in the early part of 1914, and after having practically abandoned the field for more than a year, the J. M. Shock Absorber Company employed Emile Lefevre, a competent engineer, and, when his deposition was taken in 1918, a captain in the Ordnance Department of the United States Army, who designed and developed a new shock absorber for use on Ford cars. This shock absorber was advertised extensively early in 1914 and has since been sold in substantial quantities. Petitmaire and the J. M. Shock Absorber Company were notified by plaintiff in 1916 that this construction is an infringement, hence his interest in this defense. An opinion perhaps should not be expressed in view of the probability of litigation as to whether this device is an infringement of plaintiff's patent. It is, however, sufficient to say that it was a new and different device from that constructed and installed the latter part of 1912, and is later, in point of time, than the Thompson invention.

Passing to the socalled Buffalo or Meinhart use, it will be noted that this was not set up in the answer and no notice of it was given by defendants thirty days in advance of the date of the trial, as is required by statute. Application for leave to amend the answer and set it up was applied for first within ten days before the date fixed for trial. Hon. John M. Killits, to whom the application was made in my absence, refused leave. On this hear-

ing the application was renewed to me and was denied. This case had been pending since 1914. An order had been made in June, 1916 that it should remain on the docket for trial after the decision by the Circuit Court of Appeals of the K-W Ignition Company case. Apparently Court and counsel then felt the issues were so identical that both cases would be disposed of by the decision of the Circuit Court of Appeals. Later, in February, 1918, an application for leave to file an amended answer had been made and granted over plaintiff's objection, despite the previous history of the case. This leave was granted in the exercise of a discretion, and in order that full opportunity might be given defendants to present their entire defense. Both parties during the ensuing interval of nearly one year had made preparation and taken a large volume of testimony at widely separated places to meet the issues as framed. Manifestly the hearing could not proceed if further amendments were permitted at this late date. I was of opinion then and am now that leave to amend or to bring in the Buffalo use should be and was properly denied, and that the public has no such interest in preventing the establishment of an invalid patent as justified me in disregarding plaintiff's right to a prompt hearing.

The testimony as to the Buffalo use, however, notwithstanding its inadmissibility, was received by me, under objection and exception, and is incorporated in the transcript of the oral hearing. Defendants urge that this testimony is admissible in any event as tending to show the prior art without answer or notice. It is limited to proof of a single installation of a specific type, and if admissible at all, its tendency is not to show a prior art but a prior use. All testimony as to the Buffalo use should be rejected and disregarded, and such is my holding.

No different conclusion is called for, even if this testimony be admitted. As already stated, it tends to show only a single use, the installation in March, 1912 on the Franz car. There is no substantial or sufficient evidence that any similar installation was made on any other car. Franz was the owner of a Ford car and had a sick wife who suffered discomfort from riding therein. He desired to improve its riding qualities, and having seen advertised the J. M. absorber, asked Meinhart, a garage owner, to place one on his Ford car. The J. M. absorber thus used was not the type "C" with a single cylinder, but was the double barreled, or twin type. In other respects, particularly as to the bracket and mounting, the installation was made in substantially the same manner as the Philadelphia use, that is to say a mechanic went through the ordinary mechanical performance of constructing a bracket and inverting thereon a J. M. shock absorber. It was mounted pivotally without means for limiting or controlling the side-sway or lateral movement of the car-body. Mr. Franz testifies that it made riding easier, did not interfere with the handling of the car and did not bump against the wheels or fenders. Two other witnesses are called whose testimony corroborates Mr. Franz that the date was March, 1912, and both testify as to one trip only in the Franz car shortly after the absorber was installed, during which Mr. Franz called their attention the shock absorber and said that the car jolted much less then than before in going over rough roads. One of these shock absorbers is produced. The top of its shell or casing is battered in such a way as tends at least to arouse suspicion that it had bumped against either the wheel or fender.

This testimony, in my opinion, is not sufficient to take this type of construction out of the category of an experiment. The proof is too full and convincing that this

type of construction is impracticable to be overthrown by this single incident. Moreover, whether successful or not it is a construction of a kind so different from plaintiff's invention that it does not anticipate. Defendants are at liberty to use it if they so desire. The J. M. Shock Absorber Company which installed and used the single cylinder type in substantially the same way, later discarded it as impracticable and resorted to a type of construction having the rigid mounting and means for limiting and controlling the side-sway or lateral movement, such as are present in plaintiff's construction. The law applicable to this situation is too familiar to require citation of authorities.

I am of opinion that defendants' construction is an infringement. This obviously was Judge Clarke's view when he granted the preliminary injunction and seems then to have been the view of defendants' counsel. The defendant, LeRoy A. Westman, had submitted to him by the K-W Ignition Company a sample of plaintiff's shock absorber with a request to submit a bid to manufacture the same. A bid was submitted, but no order followed. Later Westman designed and defendants began the construction of the absorber now complained of. Obviously Westman constructed the defendants' device with plaintiff's before him, and did so for the purpose of selling to the same trade, namely, the owners and users of Ford cars. No doubt, he sought to make such changes as would avoid a charge of infringement, but under these circumstances, merely colorable changes in the patented device or in its elements ought to be carefully scrutinized, and unless a new and different combination has in fact been developed, the charge of infringement cannot easily be avoided. A person in that situation, as has been well said, starts out not to patent an invention, but to invent a patent, and, as is usual in such

The United States of America }
Northern District of Ohio } ss.

I, B. C. Miller, Clerk of the District Court of the United States within and for said District, do hereby certify the foregoing to be a true copy of the Judge's Opinion filed in the above entitled cause in said Court, and that the same is correctly copied from the original now on file in my office.

Witness my official signature, and the seal of said Court at Cleveland, Ohio, in said District, this 13th day of March, A. D. 1926, and in the 150th year of the Independence of the United States of America.

B. C. MILLER,
Clerk.

By LEONARD C. MEON,
Deputy Clerk.

(Seal)

J. E. ANGER.

VEHICLE SPRING.

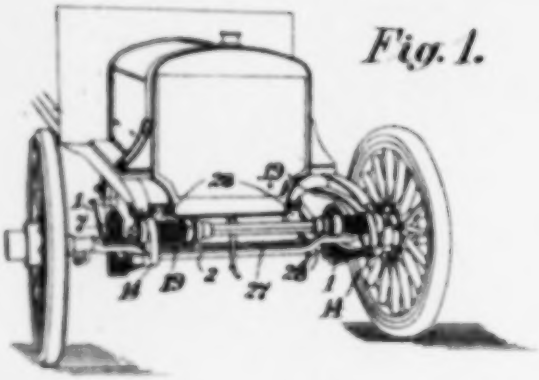
APPLICATION FILED JULY 20, 1910.

1,031,612.

Patented July 2, 1912.

3 SHEETS-SHEET 1.

Fig. 1.



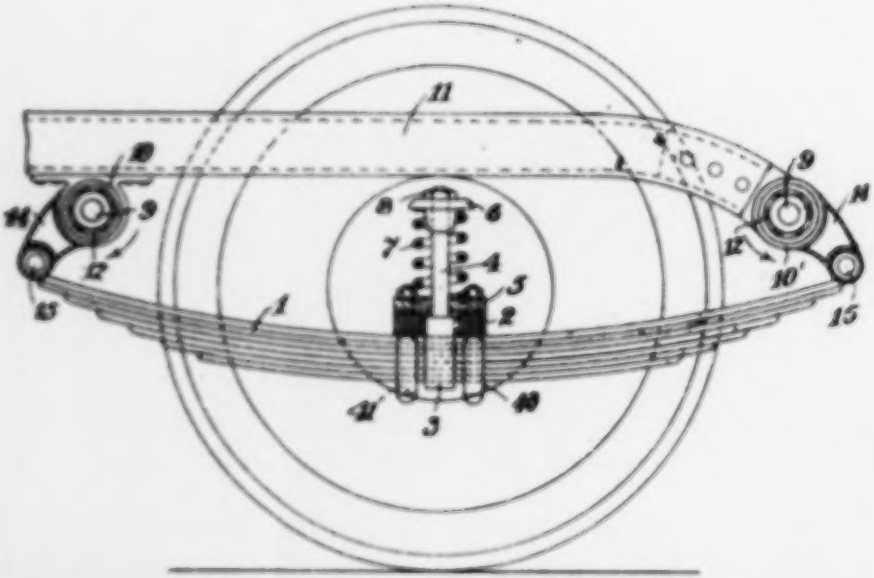


Fig. 2.

Witnesses

Bruce P. Brenton

Albert Popham

Inventor

John E. Anger

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Attys.

J. E. ANGER.

VEHICLE SPRING.

APPLICATION FILED JULY 20, 1910.

1,031,612.

Patented July 2, 1912.

3 SHEETS—SHEET 1.

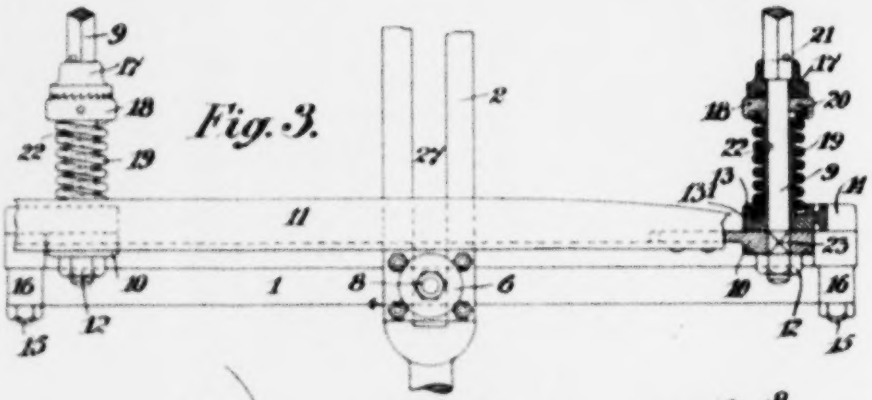


Fig. 3.

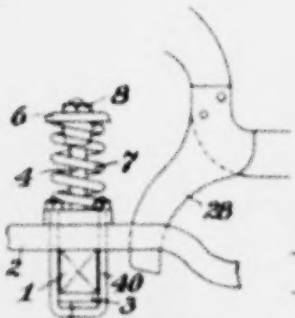


Fig. 6.

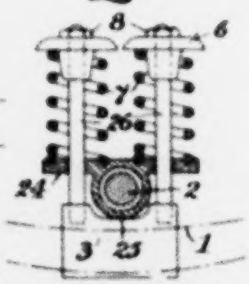


Fig. 7.

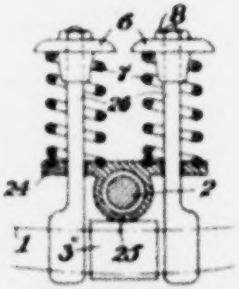


Fig. 8.

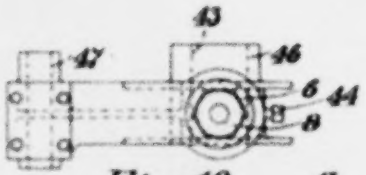


Fig. 10.

Fig. 4.

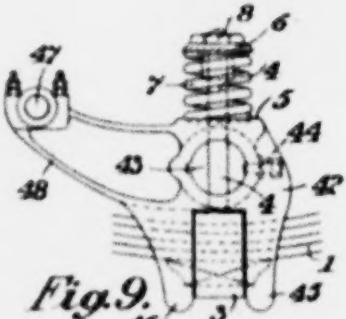


Fig. 9.

Witnesses

Grace P. Brereton

Albert Popkins

Inventor

John E. Anger

By Sturtevant & Hueson

Attys

J. E. ANGER.

VEHICLE SPRING.

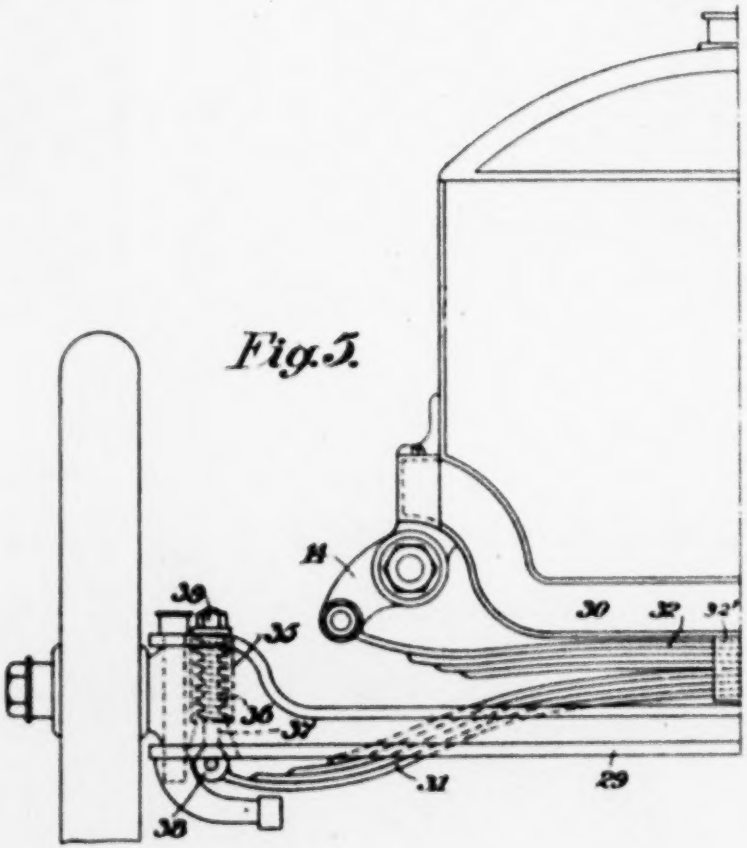
APPLICATION FILED JULY 30, 1910.

1,031,612.

Patented July 2, 1912.

3 SHEETS—SHEET 3.

Fig. 5.



Witnesses

Grace P. Brenton

Albert Popkins

Inventor

John E. Anger

By Sturtevant & Mason

Attys

UNITED STATES PATENT OFFICE.

JOHN EDWARD ANGER, OF PRESTON, ENGLAND.

VEHICLE-SPRING.

1,031,612. Specification of Letters Patent. Patented July 2, 1912.

Application filed July 20, 1910. Serial No. 572,826.

To all whom it may concern:

Be it known that I, JOHN EDWARD ANGER, a citizen of the United States of America, residing at Preston, in the county of Lancaster and Kingdom of England, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is a specification.

This invention relates to springs or spring devices for road vehicles, the object being to more effectually secure smoothness and uniformity of motion, absorb vibrations and concussions, such as are experienced when a vehicle is traveling along a road, also enable the springs to be adjusted to vary the resiliency to suit circumstances.

The invention is specially, though not exclusively, applicable to motor road vehicles.

The invention will be understood from the following description, reference being had to the accompanying drawings, in which:—

Figure 1 is a perspective view of the front of a vehicle with my invention applied thereto; Fig. 2 is a side elevation of my spring arrangement applied to a non-rotating axle of a road vehicle; Fig. 3, a plan view thereof; Fig. 4, a side view of the crank arm; Fig. 5, a front view of a motor road vehicle, showing the application of my torsion spring device when transversely arranged laminated springs are used in connection with the front axle; Fig. 6, a front view of my resilient and adjustable spring carrier and guide horn; Figs. 7 and 8, front views of my invention applied to a live axle; Fig. 9, a side view showing my invention applied to the stationary back axle, and the provision of a casting for strengthening the axle and carrying the brake band; Fig. 10, a plan view.

By the present invention, I provide the laminated spring for absorbing the greater road shocks, vertical spiral springs to absorb the lesser ones, and transverse spirals to act as spring checks, as well as shock absorbers, so that excessive reaction or bounding is checked, and last but not least, both vertical and transverse springs are adjustable for load, and for regulating the reaction of the springing system as a whole.

Referring first to Figs. 1, 2, 3, 4 and 6, 1 are the laminated springs secured to, or suspended from, the axle 2 at their center, and their leaves are bound together at the center by a strap 3. The strap 3 is provided with an upstanding rod or extension piece 4 which passes through a hole in the axle 2 and through holes in the top and bottom spring caps 5 and 6. Between these caps is placed a spiral spring 7, which can be compressed or expanded by turning a nut 8 on the top of the upper spring cap 6. The bottom spring cap 5 rests on and is secured to the axle 2. By screwing up the nut 8 on the top spring cap 6, the laminated spring 1 is drawn up against the under side of the axle 2, so as to be held against it, but in a resilient manner. A resilient and adjustable quick acting spring is thus formed which absorbs all the ordinary rapid road shocks and can be adjusted by the nut at the top, so as to give the desired flexibility. The spring 1 being carried by the spring 7, all small road shocks are absorbed at the axle, and never pass through the whole length of the laminated spring. At each end, the laminated springs are coupled by pins 15 to levers 14, around the sleeves 22 of which is wound the spiral torsion spring 19. One end of the spring is made fast to it at 13′ and the other end is attached to the loose collar 18 which has teeth engaging similar teeth on a collar 17 secured to the spindle 9. These teeth are inclined like ratchet teeth in such a manner that the loose collar 18 can be revolved to pass the teeth on the fixed collar 17 in one direction only, so as to allow any desired tension to be put on the torsional spring. The crank arms 14 in their normal position lie approximately diagonal, and the weight of the vehicle is transmitted through the crank arms 14 to the laminated springs 1, also to the spiral torsion springs 19 turning the cranks in the direction of the arrows, and bending the laminated springs 1, also apply a greater or less twist to the torsion springs 19. Their torsion being opposed to the action of the laminated spring, tends to force the wheel to the ground, and supports the load, whenever the wheel drops from it by following the road. These torsional springs overcome all the unpleasantness of being thrown about by the reaction of springs when passing over bad roads, and hold the wheels to the road, thus saving wear of tires and allowing full power and effort to the engine to be transmitted through the wheels to the chassis frame. Much of the wear on back tires is caused by grinding away the rubber or studs when the wheel momentarily leaves

or nearly leaves the road surface, but with the present invention, the springs really hold the wheels to the road. The spindles 9 on which the crank arms 14 are loosely mounted are secured in dumb irons or brackets 10, 10', secured to the frame 11 and made fast by nuts 12. To decrease the resiliency of the torsion springs, the collars 18 to which one end of the torsion springs 19 is attached, are turned in a direction contrary to that of the arrows by a spanner or lever, so that its inclined teeth will slide past the clutch teeth on the fixed collar 17, and so give a greater twist to the spiral spring 19. The teeth on the fixed collar acting like detents, will prevent the return of the loose collar 18, and so the spiral spring 19 is held highly twisted. This will lessen its resiliency. To increase its resiliency the fixed collar 17 is unlocked by removing the pin 21 and sliding the collar 17 on the squared part of the shaft 9, so as to release or slacken the twist of the spring 19. In this way the resilience of the torsional springs 19 is made adjustable to suit circumstances, such as variations of the load, or the degree of roughness or smoothness of the road along which the vehicle is traveling. Whether the vehicle is lightly loaded or heavily loaded, the concussions will be absorbed by the springs 1, 7 and 19, and smoothness of running obtained, so that if desired solid tires can be used instead of pneumatic ones.

I wish it to be understood that I do not confine myself to using a single spiral spring 7 in connection with each laminated spring 1. Twin springs might for example be used. If the axle 2 is a live one as shown in Figs. 7 and 8, seats 24 would be arranged on the casing or journal boxes 25 of the axle, that is one on each side of a vertical line passing through the axle. Projecting upwardly from the strap 3' (Fig. 7) and fastened thereto are a pair of rods or extensions 26, which pass through guide holes in the seats 24 and through holes in the top spring caps 6, and between the seats and caps are placed the twin spiral springs 7. In Fig. 8 the rods 26 pass around the laminated springs at their lower ends instead of being secured to the spring strap 3''. In both cases the laminated spring 1 is drawn up against the axle casing 25 and held against it by the spiral springs 7, and in both cases also the play is restricted by the holes in the seatings 24 through which the rods 26 pass, to a vertical movement. The action is the same as before, and the tension of the springs 7 is so adjusted as to just carry the load and hold the laminated spring against the casing or journal boxes 25. But, when the wheel rides over an obstruction or falls into a cavity, the spiral springs to some extent absorb the shock and vibration instead of the whole force of the shock coming upon the laminated springs.

In order to get a lateral movement of the body, plus the spring controlled up and down movement already described, and yet prevent backward movement of the axle independently of the chassis and body, I make the front axle 2 with an elongated longitudinal slot 27 in it, Figs. 1 and 3, and attach to the frame a pair of horns or extensions, one of which is shown at 28, Fig. 6, and both of which are shown in Fig. 1. These pass vertically through the elongated slot 27, in the axle, and permit lateral movement of the chassis through the horns being allowed to play in the elongated slots. The body and its chassis is centralized between the wheels by the springs 1, so that there is very little swing when traveling along a straight course, but when the car is being steered around a curve, then the springs give sufficiently to permit of this lateral movement of the horns along the slot, the chassis however being cushioned against lateral jars by the springs 1 and 7 while full freedom for vertical movement is allowed for by the down coming horns which are in a vertical plane. At the same time these horns absolutely prevent the shock of the wheels (in a fast running vehicle) when striking an obstruction, from throwing the wheel and axle, with the laminated springs and the spiral ones, momentarily backward. This throwing of the wheel backward if permitted, must wear the tread of the tires, since it is in the opposite direction to the forward movement of the wheels, and the greater the backward movement, the greater will be the slipping or wearing of the tread on the road surface. The horns or extensions 28 engaging the longitudinal slot or division in the axle, entirely prevent this backward movement, when the wheel strikes an obstruction, while at the same time permitting of lateral play, to allow of the body accommodating itself in a yieldable manner and relieving the occupants of a car from any sudden shock when turning a curve. The desirability of having a lateral cushion or play for relieving the severe shock caused by the sudden deviation from a straight course, is almost as important as having a vertical cushion or play for absorbing shocks due to inequalities in the road surface.

The laminated spring for absorbing the greater road shocks, the vertical spiral springs to absorb the lesser ones, and the transverse spirals to act as spring checks as well as shock absorbers, so that excessive reaction or bounding is checked, can equally well be applied to the front or rear axle. When however it is desired to arrange the laminated springs transversely instead of longitudinally, the arrangement shown in Fig. 8 might be used. In this 29 is the

front axle, 30 the underframe of the vehicle, 31 the main laminated spring which is combined with the compensating spring 32 also laminated, and either nearly straight or of opposite curvatures. The spring 32 is fastened to the main one 31 at mid-length by the strap 32' and its ends are coupled respectively to the crank and torsional spring arrangement 14 which latter has been already described in connection with Figs. 1, 2 and 3. The main laminated spring 31 at mid-length, is located above the axle 29, and the said axle is divided for part of its length, that is, provided with an opening at mid-width to allow for the main laminated spring 31 to pass through the axle from above, and engage with a projecting eye 38 on the under side of the axle near the axle journals on which the wheel is mounted. 35 is a pocket or cavity proceeding downwardly from the top of the axle. In this pocket 35 is placed the vertical spiral spring 36 which is seated on the bottom of the said cavity, and through the spring passes a bolt 37 having the eye 38 at the bottom end, which is coupled to the ends of the transverse laminated bearing spring 31, while at the upper end, the eye bolts 37 have a washer, or a follower and nut 39 bearing upon the top of the spiral spring 36. The nut 39 provides means for adjusting the tension of the spring 36. Hence the load is borne by the laminated springs 31 and 32, for absorbing the greater shocks, the vertical spirals 36 to absorb the lesser ones, and the transverse spirals acted on by the levers 14 to act as spring checks.

The object of hanging the spring from below the axle as described, instead of from the upper side as hitherto, is to secure a low hung car without in any way interfering with the springiness, or absorption of vibration.

Referring now to Figs. 9 and 10, 3 is the strap which binds the leaves of the spring 1 together, 4 an upstanding rod which passes through a hole in the axle, and through the casting 42, the latter having a hole 43 through which the stationary axle passes, and is fixed thereto by a key and by a set pin 44. The depending arms 45 of the casting straddle the spring 1, and between the seating 5 and the cap 6 is placed the spring 7. One object of using this casting is to prevent lateral movement of the spring 1 independently of the axle and restrict the play to the axial line of the rod 4, and hence serve a similar purpose to the arrangements described with reference to Figs. 2 and 8. Another object is to give strength to the axle 2 which might be weakened by the hole for the passage of the rod 4. On this casting is a sleeve 46 for further strengthening the axle through being weakened by the hole for the rod 4, and a lateral arm 48 which forms a support or bracket for the shaft which operates the brake band, for which purpose it is provided with journal bearings 47. The action of the springs 1 and 7 is the same as that already described with reference to Fig. 2.

I declare that what I claim is:—

1. In spring bearing devices for road vehicles, the combination of the laminated spring or springs arranged below the axle for absorbing the greater road shocks, a bolt passing upward from its center strap through the axle, vertical coiled springs seated on or in connection with the axle from which springs the bolt is suspended, transverse spirals supported inside the vehicle frame on shafts and their inner ends attached thereto, and short levers connecting the outer ends of the said transverse spirals to the ends of the laminated springs, said transverse spirals being made to act or unwind very rapidly for the purpose of causing the laminated springs to recover themselves, and keep the wheels to the road however quickly a succession of obstructions are encountered, whereby tire slip is reduced.

2. In spring bearing devices for road vehicles, the combination of a laminated spring or springs for absorbing the greater road shocks, vertical spiral spring or springs seated on or in connection with the axle to absorb the lesser ones, spindles made fast to the vehicle, cranks mounted thereon and coupled at the ends to each laminated spring, a spiral spring in connection with each crank to act as spring check to prevent excessive reaction or bounding, said spirals being placed lengthwise on the spindle and made fast at one end to the boss of the crank, while the other end is made fast to a loose collar, said collar having ratchet teeth on one face engaging corresponding teeth on the opposing face of a fixed collar in such manner that the loose collar can be revolved in one direction to tighten the spring, but be prevented from turning back.

3. In spring bearing devices for road vehicles having non-rotating axles, the combination with the laminated spring located at mid-length below the axle, of an upstanding rod projecting from its center strap and passing through the axle, a spiral spring seated on the axle through which the said rod passes, a cap and nut at the top of the rod for compressing the spiral spring and holding the laminated one up against the axle, and safety or guide links secured to the axle and passing around the laminated spring with a clearance between, substantially as described.

4. In a spring device for road vehicles, the combination of a laminated spring for absorbing the greater shocks, cranks connected to the ends of said spring, torsion springs acting on said cranks, a coil spring

above the center of the laminated spring, an axle between the coil spring and the laminated spring, means carried by the coil spring for supporting the laminated spring, and means for varying the tension of said coiled spring.

5. In a spring device for road vehicles, the combination of a laminated spring for absorbing the greater shocks, cranks connected to the ends of said springs, torsion springs acting on said cranks, ratchet teeth devices for varying the torsion of said springs, a coil spring above the center of the laminated spring, an axle between the coil spring and the laminated spring and supporting the coil spring, means carried by the coil spring for supporting the laminated spring, and means for adjusting the tension of said center coil spring.

6. In a spring device for road vehicles, the combination of a laminated spring for absorbing the greater shocks, torsion springs acting upon the ends of said spring, a coil spring above the center of the laminated spring, an axle between the coil spring and the laminated spring, and supporting the coil spring, means carried by the coil spring for supporting the laminated spring, and means whereby the coil spring is put out of action and the laminated spring supported by the axle.

In witness whereof, I have hereunto signed my name this 12 day of July, 1910, in the presence of two subscribing witnesses.

JOHN EDWARD ANGER.

Witnesses:
G. C. DYMOND,
JOHN MCLACHLAN.

W. STORRIE.

SHOCK ABSORBER.

APPLICATION FILED MAR. 10, 1914.

1,279,035.

Patented Sept. 17, 1918.

Fig. 2.

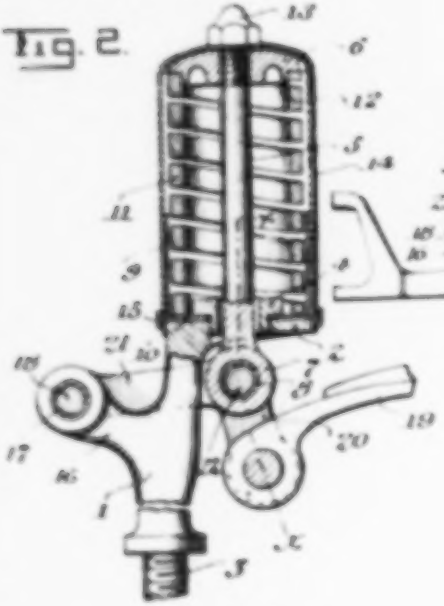


Fig. 1.

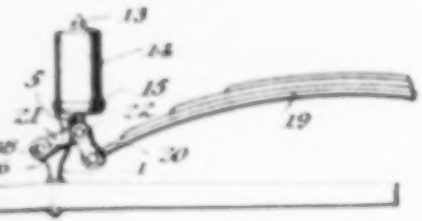
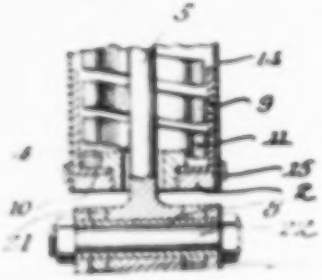


Fig. 3.

Fig. 4.



UNITED STATES PATENT OFFICE.

WILLIAM STORRIE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE K-W IGNITION COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

SHOCK-ABSORBER.

1,279,035. Specification of Letters Patent. Patented Sept. 17, 1918.

Application filed March 18, 1914. Serial No. 825,568.

To all whom it may concern:

Be it known that I, WILLIAM STORRIE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Shock-Absorbers, of which the following is a specification.

The present invention relates to means for absorbing the vibrations and shocks in vehicle springs to such an extent as not to cause annoyance to the rider and strain to the springs of the vehicle, which would tend to cause such springs to crack or otherwise become disabled.

The invention provides a shock absorber embodying an expansible helical spring and supporting means therefor of novel formation, one of such supports being secured to the axle and the other being shackled or otherwise attached to the vehicle spring, the parts being arranged to control the vibrations or shocks not taken up quick enough by the main spring and thereby overcome the objectionable features herein mentioned.

The invention also provides a device which supplements the action of the main spring of the vehicle and also serves to neutralize the vibration and other shocks which are not ordinarily taken up by the main spring of the vehicle and which tend to add to the inconvenience of the rider.

The invention also further provides an appliance which while acting as a shock absorber does not interfere with the maximum movements of the main spring and which is of such construction as not to be materially affected by side movement which would tend ordinarily to produce ineffective action and cause lateral strain and render the efficiency of the device comparatively short-lived.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated and claimed.

In the drawings hereto attached:—

Figure 1 is a detail view showing the application of the invention.

Fig. 2 is a vertical section.

Fig. 3 is a top plan view.

Fig. 4 is a section on the line *x—x* of Fig. 2 looking in the direction of the arrow.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawing, by the same reference characters.

The device comprises a bracket which is adapted to be secured to the axle, a rod adapted to be connected by means of a shackle or otherwise to the vehicle spring and bracket, and an interposed expansible helical spring. The bracket comprises an arm 1 and base 2, said arm being adapted to be secured to the axle of the vehicle in any manner as by means of a threaded shank 3. The base 2 is arranged to occupy an approximately horizontal position and is formed with a central opening in which is fitted a bushing 4 which retains the spring seat, shell 9. The rod 5 extends vertically and is provided at its upper end with a yoke 6 and at its lower end with an eye 7 which extends transversely and receives a bushing 8. A shell 9 is mounted upon the base 2 and is provided at its lower end with an inturned flange 10 which is confined between the base 2 and an outer flange at the upper end of the bushing 4. The shell 9 receives the lower portion of an expansible, helical spring 11 which is supported upon the base of the bracket. The spring 11 rests upon the inturned flange 10 and is prevented from lateral movement by means of the shell 9. The yoke is secured to the upper end of the rod 5 in any manner and rests upon the spring 11 and is retained in position thereon against lateral displacement by means of a raised portion 12 which enters a spring 11. As shown the upper end of the rod 5 is threaded and passes through an opening of the yoke 6 and receives a nut 13. A housing 14 consisting of a shell incloses the spring and shell 9 and extends over the yoke 6 and serves to exclude foreign matter from the spring and to prevent the escape of any lubricant applied to such spring and the shell 9. The housing 14 moves with the yoke 6 and rod 5, and is strengthened at its lower end by means of a band 15 which also gives a finished appearance thereto.

The arm of the bracket 1 has an offset portion 16 in which is formed a transverse opening to receive a bushing 17 and pin 18. The vehicle spring 19 is connected by means of a shackle or links 20 with the rod 5 and other links 21. Under normal conditions

the links 20 have an upright position and the links 21 a horizontal arrangement. A pin 22 connects the links 20 and 21 and the rod 5. The bushing 8 mounted upon the pin 22 passes through the eye 7 of the rod 5 and through the openings of the links 21. The links 20 and 21 have a toggle arrangement and admit of the spring 11 supplementing the action of the spring 19 as also providing for the neutralizing of shock and vibration with the result that the occupant of the vehicle experiences comfort in riding and the vehicle is free from jar which ordinarily would add materially to the wear of the parts.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the invention as claimed.

Having thus described the invention, what is claimed as new is:—

1. In combination, a support embodying a base and an off standing portion, a yieldable device mounted upon the said base, a connection suspended from the yieldable device and passing therethrough and through the base, links embracing the support and the off standing portion thereof and pivotally connected at one end to such off standing portion and at its opposite end to the before mentioned connection and other links connecting the vehicle spring with the first mentioned links and the said connection, said links having a toggle arrangement.

2. A device of the character set forth, comprising a bracket embodying an arm, base, and off standing portion, said base having an opening, a flanged bushing fitted in the opening of the base, a shell mounted upon the base and having an inturned flange which is confined thereto by means of the flanged bushing, an expansible helical spring mounted upon the base, a rod passing through the spring and base and having an eye at its lower end, a yoke connected to the upper end of said rod and mounted upon the spring, a housing inclosing the yoke, spring, and shell links embracing the arm and off standing portion of the bracket and pivoted at one end to such off standing portion, of two classes of springs arranged substantially in the plane of said axle, one being a substantially horizontal leaf spring and the other a coil spring substantially in the vertical, the former connected to the radius link by a shackle, and the latter carrying a rod connected to the radius link and supported by said support, substantially as and for the purposes described.

4. In a vehicle spring suspension device, the combination, with an axle, a support secured thereto, and a radius link pivoted to said support, of two classes of springs arranged substantially in the plane of said axle, one being a substantially horizontal leaf spring and the other a coil spring substantially in the vertical, the former connected to the radius link and the latter carrying a rod connected to the radius link and supported by said support.

5. In a vehicle spring suspension device, a support, said support having a shoulder and an extension of less width than the shoulder, said extension being adapted for mounting in a vehicle axle a resilient element seated upon said support, a member engaging an end of the resilient element and adapted to move toward the support to compress the resilient element against the support, means connected with the said member and adapted for connection to a vehicle spring, and a radius link pivotally connected to the support and to said means.

6. A vehicle spring suspension comprising a support having a base part extending substantially at right angles to the support, said support also having a shoulder and an extension of less width than the shoulder, said extension being adapted for mounting in a vehicle axle, a resilient element seated upon the base which forms an abutment against which said element may be compressed, a yoke engaging an end of the resilient element, a rod extending longitudinally with respect to the resilient element, and a radius link pivoted to the support and to the rod.

7. In combination, an axle, a support secured to the axle, a resilient element seated upon the support which forms an abutment against which said element may be compressed, a vehicle spring extending substantially parallel with the axle, a member engaging an end of the resilient element, means connecting the said member with the spring and a radius link pivotally connected to the support and to the said means for the purpose described.

8. In combination, an axle, a support

ement toward and against the support, a ehicle spring extending substantially parllel with the axle of the vehicle, means for nnecting the said rod with the end of the pring, and a radius link pivoted to the suport and to the rod for the purpose deribed.

9. In combination, an axle, a support nounted upon the axle, said support having base with an opening therethrough, a esilient member mounted upon said base hich serves as an abutment against which he resilient element is compressed, and a oke engaging an end of the resilient memer, a rod secured to the yoke and extending xially through the resilient member and hrough the opening in the said base, saill upport having a projecting portion, a adius link pivotally mounted upon the said rojection and upon the end of the rod, vehicle spring extending substantially arallel with the axle, and a toggle link onnecting the end of the spring to the end f the rod.

10. A vehicle spring suspension device omprising a support, a resilient element eated upon the support, a member engagng the resilient element, a member operaively connected to an end of the spring nd adapted for connection to a vehicle pring, a radius link pivotally connected to he support and to the last mentioned memer and a casing surrounding the resilient element and mounted to move with the resilient element.

11. A vehicle spring suspension device comprising a support having an extension, a resilient element seated upon said extension, a yoke engaging the resilient member, a rod connected to the yoke and adapted for connection with a vehicle spring, a radius link pivotally connected to the support and to the last mentioned member and a casing surrounding the resilient element and mounted to move with the resilient element.

12. A vehicle spring suspension device comprising a support having an extension, a casing upon said extension, a resilient element having an end portion mounted within said casing, a yoke member engaging the said resilient member, a second casing surrounding the upper part of the resilient member and telescoping with the first mentioned casing, a rod secured to the yoke and extending axially through the resilient element and adapted at its free end for connection with a vehicle spring, and a radius link pivotally connected with the support and with the said rod for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM STORRIE.

Witnesses:
W. W. Wilson,
Frederick H. Bratesman.

R. P. & W. S. THOMPSON.

AUTOMOBILE.

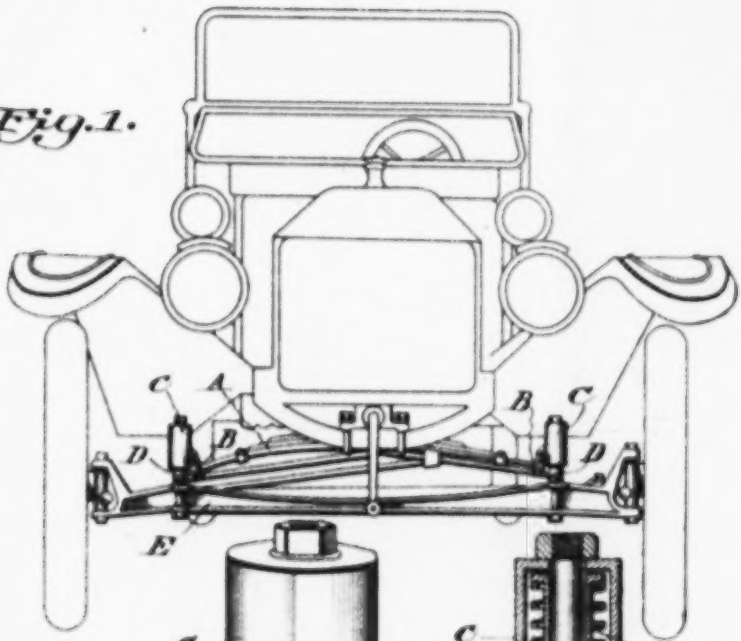
APPLICATION FILED OCT. 10, 1912.

1,072,791.

Patented Sept. 9, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



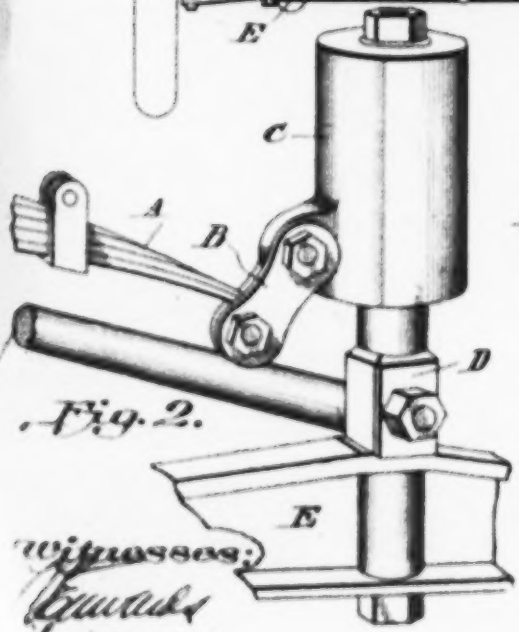


Fig. 2.

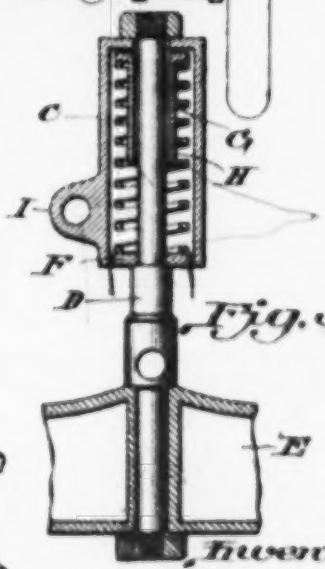


Fig. 3.

Witnesses:

Inventors

Ralph P. Thompson

William S. Thompson

R. P. & W. S. THOMPSON.

AUTOMOBILE.

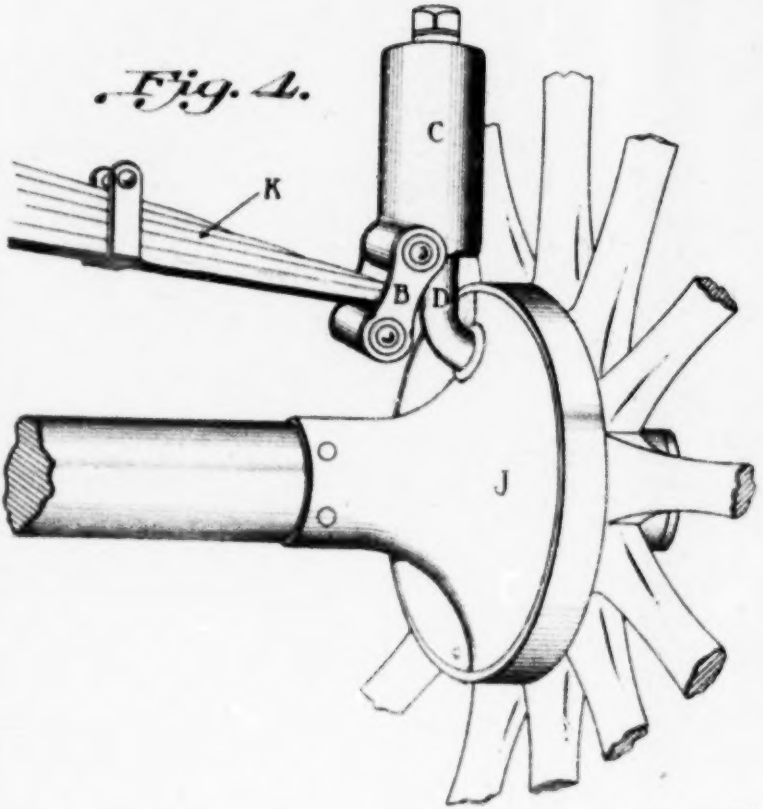
APPLICATION FILED OCT. 10, 1912.

1,072,791

Patented Sept. 9, 1913.

2 SHEETS—SHEET 2.

Fig. 4.



Witnesses:

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Ry Davis

Inventor

Ralph P. Thompson
William S. Thompson

UNITED STATES PATENT OFFICE.

RALPH P. THOMPSON AND WILLIAM S. THOMPSON, OF LEIPSIC, OHIO, ASSIGNORS OF ONE-THIRD TO OLIVER P. EDWARDS, OF LEIPSIC, OHIO.

AUTOMOBILE.

1,072,791. Specification of Letters Patent. Patented Sept. 9, 1913.

Application filed October 10, 1908. Serial No. 756,979.

To all whom it may concern:

Be it known that we, RALPH P. THOMPSON and WILLIAM S. THOMPSON, citizens of the United States, residing at Leipsic, county of Putnam, and State of Ohio, have invented certain new and useful Improvements in Automobiles, of which the following is a specification.

This invention relates to the spring suspension for automobiles.

The object of our invention is to provide efficient means for steering shafts to the road wheels, thereby making the car more easily riding.

A further object is to separate the spring element into sets of members, each set acting in unison, but in which a difference exists between the members of each set in the time of commencement and recoil, for the purpose of causing the spring movement to have the nature of a series of pulsations and of explosions with each other, and therefore serving to be absorbed within the spring element itself, vibrations that would otherwise be transmitted to the car frame. We accomplish this by the use of the slow acting friction rebound leaf spring of common construction, and combining in action with it, the quick acting coiled spring, together with devices which render the mechanism efficient and durable.

In the accompanying drawings, which form a part of these specifications, Figure 1 shows the front view of an automobile equipped with our spring suspension. Fig. 2 is a perspective outline of the rear of the leaf spring, together with the sliding hanger and a portion of the axle. Fig. 3 is a section in detail of the spring hanger, its guide, its supporting spring, and also showing the method of its attachment to the axle. Fig. 4 is a detail in perspective of the rear spring suspension.

In Fig. 1 the front coil spring B is secured at either end to arms of the bell crank D and D' on the spring hangers C and C'. The guides D² and D³ are bolted to the axle I and extend upward through the hangers C and C', and terminate in a suitable stop for limiting the upward movement of the hangers C and C'.

In Fig. 3 a bearing washer F on the guide D² acts as a bearing to support the weight of the hanger C as it moves downward. The bearing washer F also serves as a support for the coiled spring G. A sliding collar H rests upon the top of the spring G within the hanger C. The main portion of the hanger C is cylindrical in form and adapted to inclose the spring G. The guide D² extends through an opening in the top of the hanger C, and is provided with a suitable stop for confining the hanger C within the proper limit of its upward movement. The lower end of the collar H, upon which the hanger C rests, is adapted to come in contact with the washer F in confining the hanger C within the proper limit of its downward movement. A lug I, Fig. 3, on the hanger C is adapted to support the end of the spring A. Fig. 2 shows link E supporting the spring A, a swinging movement of the link E acting to compensate for the elongation of the leaf spring under pressure.

Fig. 4 shows in detail the method of attaching the suspension to the rear axle. The guide D² is attached to the axle flange J, which brings the guide D² close to the rear wheel, thus permitting the use of the greatest possible length of leaf spring K within the distance of the distance between the rear wheels.

The action which takes place in our spring suspension when the wheels is in motion is as follows: Shock to the road wheel is absorbed more rapidly by the quick acting coiled spring than by the slow acting friction rebound leaf spring. The recoil of that shock to the road wheel is first absorbed by the coiled spring, and therefore is transmitted to the body of the car and the motion goes through the slow acting leaf spring. So the compression and recoil of the leaf spring is not synchronous with that of the coiled spring the recoil of the coiled spring begins to take place before the full effect of shock to the road wheel can be transmitted through the leaf spring to the body of the car. The car acting effect, as it were, between the coiled spring and the slow acting leaf spring causes a large portion of the effect from vibration to be absorbed by the action of the coiled spring, and the action of the leaf spring taking place almost instantly, the bearing within the spring element for the hanger C instantly reducing the car from any riding

C. C. GAMM & C. F. NELSON.

VEHICLE SPRING.

APPLICATION FILED OCT. 6, 1913.

1,116,878.

Patented Nov. 10, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

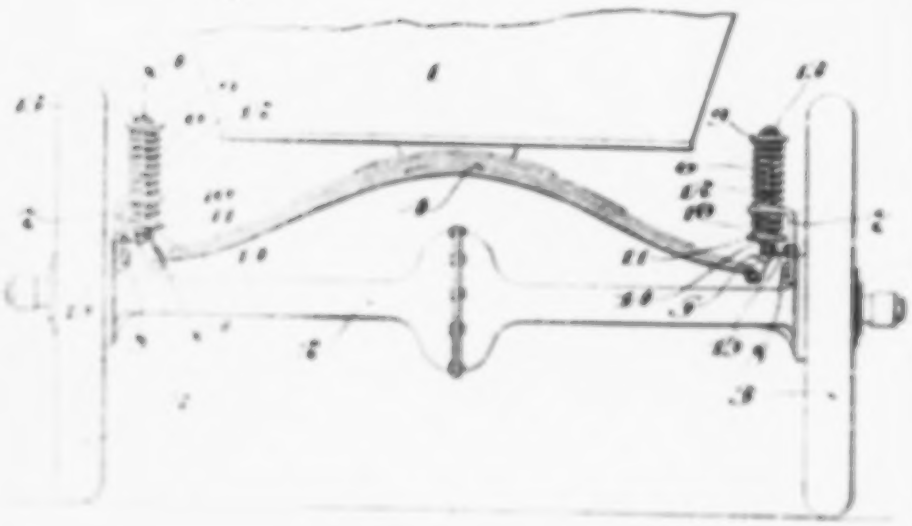
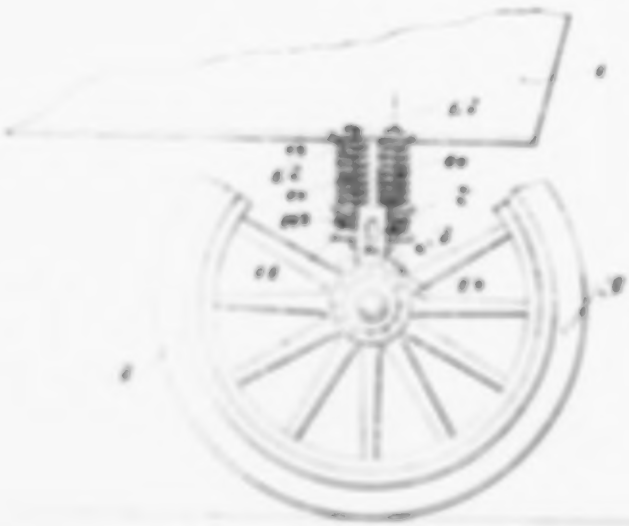


Fig. 2.



Witnesses

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C. F. Nelson

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VEHICLE SPRING.

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Fig. 1

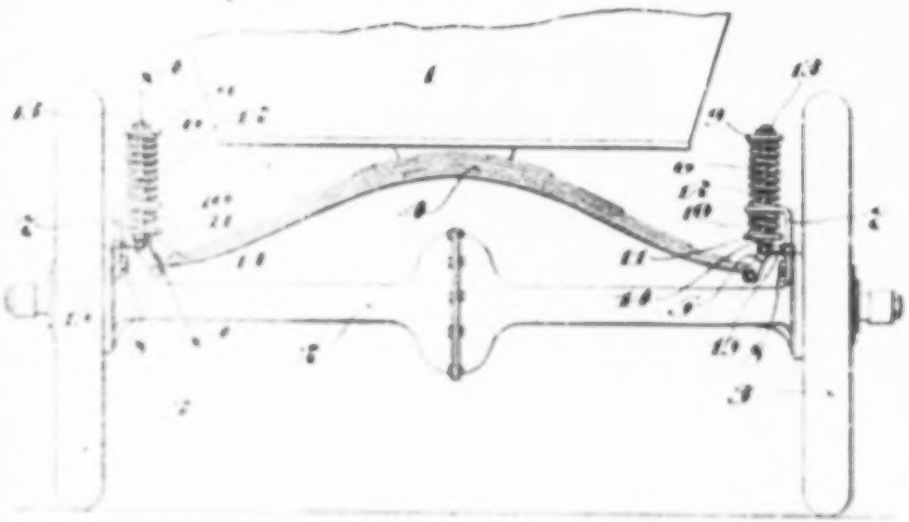
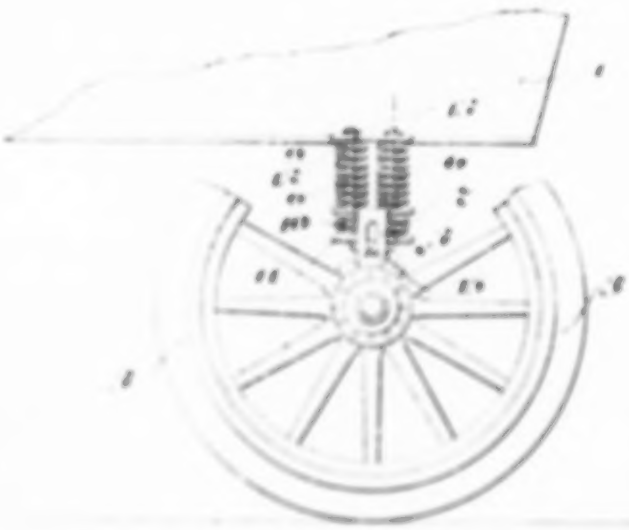


Fig. 2



Witnesses

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VEHICLE SPRING.

APPLICATION FILED OCT. 4, 1913.

1,116,878.

Patented Nov. 10, 1914.

2 SHEETS—SHEET 2.

Fig. 3

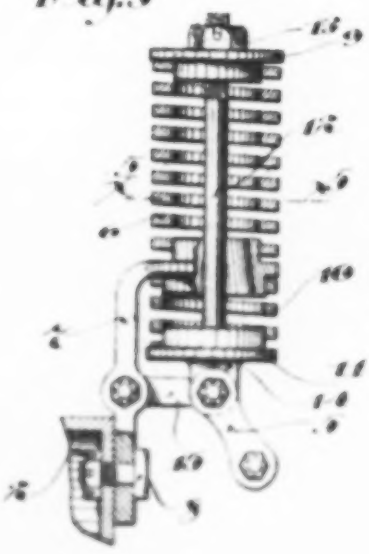


Fig. 4

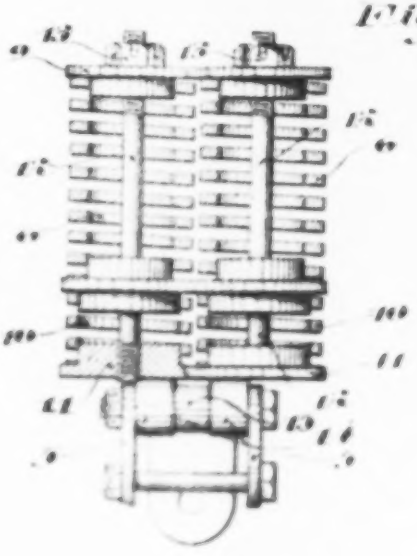


Fig. 5

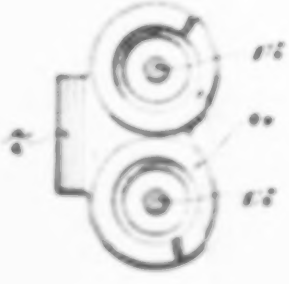
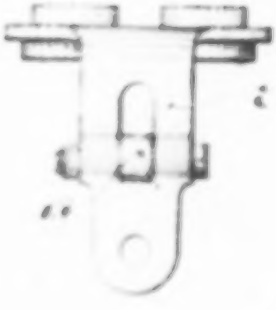


Fig. 6



Witnesses

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A. M. Spruhl

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Charles C. Gamm and

Carl F. Nelson

By their Attorneys

Williamson & Merchant

UNITED STATES PATENT OFFICE.

CHARLES C. GAMM AND CARL F. NELSON, OF MINNEAPOLIS, MINNESOTA.

VEHICLE-SPRING.

1,116,878. Specification of Letters Patent. Patented Nov. 10, 1914.

Application filed October 4, 1913. Serial No. 793,375.

To all whom it may concern:

Be it known that we, CHARLES C. GAMM and CARL F. NELSON, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Vehicle-Springs; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention has for its object to provide an improved vehicle spring, especially adapted for use in connection with automobiles, and to such ends, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a rear elevation, showing parts of the running gear and body of an automobile, and illustrating our improved spring mechanism arranged to support the latter over the former, some parts being broken away; Fig. 2 is a side elevation of the parts shown in Fig. 1, some parts being broken away; Fig. 3 is a detail in vertical section taken on the line x^3 x^3 of Fig. 2; Fig. 4 is a vertical section taken approximately on the line x^4 x^4 of Fig. 1, some parts being shown in full; Fig. 5 is a horizontal section taken on the line x^5 x^5 of Fig. 3; and Fig. 6 is a view in elevation showing one of the spring supporting brackets.

The numerals 1, 2 and 3 indicate, respectively, the automobile body, the rear axle casing, and the rear wheels.

The numeral 4 indicates a semi-elliptical spring, the intermediate outwardly bowed portion of which is directly connected to the body 1. This spring 4, in the ordinary or old construction, would be connected at its ends by links 5 directly to so-called spring brackets, or other suitable parts on the vehicle running gear. In our improved spring mechanism, the spring 4 is used as a primary spring and its ends are connected to suitable parts of the vehicle running gear, through so-called secondary springs. These secondary springs are preferably coiled springs 6 arranged in pairs on the opposite sides of the vehicle, seated on the laterally inclined ends of so-called spring brackets 7, which, in turn, are bolted or otherwise rigidly secured at 8 to under portions of the rear axle casing 2.

Spring caps 9 are seated on the upper ends of the so-called secondary spring 6. Recoil springs 10 are seated on lower spring caps 11 with their upper ends bearing against the under surfaces of the in-turned ends of the spring brackets 7. The spring caps 9 and 11 and the in-turned ends of the brackets 7 are formed with hubs that telescope into the ends of the coiled springs and keep the same properly alined. Also, the in-turned ends are perforated to afford ample clearance for hanger-bolts 12 that are extended therethrough, and are connected to the spring caps 9 and 11. As shown, the lower ends of the bolts 12 are screwed into the lower caps 11 and the threaded upper ends are loosely passed through the upper caps, and are provided with nuts 13, by adjustments of which the normal tension of the springs 6 and 10 may be varied. In this twin or duplex arrangement of the secondary springs 6 and recoil springs 10, the in-turned portions of the brackets 7 and the spring caps 9 and 11 are each provided with two sets of bosses for engagement with the twin springs; and, of course, two bolts 12 are used to connect each pair of spring caps 9—11.

The links 5 which, as previously noted, are pivotally connected to the ends of the primary spring 4, are pivotally connected at their upper ends to lugs 14 on the bottoms of the lower spring caps 11, and these same lugs are pivotally connected to their inner ends of short thrust links 15, the outer ends of which are pivotally connected to the respective spring brackets 7. Preferably, and as shown, the links 5 are each made up of two short laterally spaced metal straps. The tension of the secondary spring 6 should be so set that, under light loads and under ordinary running conditions, the vibrations will be taken and absorbed by the primary spring 4, but so that, under heavy loads or extreme vibrations, the coiled secondary spring 6 will yield and give increased resiliency, and, also, thereby relieve the primary spring from extreme strains. The thrust links 15 permit free movements of the springs 4 and 6 but hold the body of the vehicle and the primary spring 4 against

lateral movements transversely of the running gear. The recoil springs 10 prevent bounding, and the primary and secondary springs recoil after a sudden and extreme depression.

The improved spring mechanism described, while simple and of small cost, makes the vehicle easy riding and self-adjusting to varying loads and to varying shocks.

What we claim is:—

The combination with the running gear and body of a vehicle, of a primary spring secured to said body, a spring bracket on said running gear, a hanger rod working through a passageway in said spring bracket, upper and lower spring caps on said hanger rod, a secondary spring compressed between said spring bracket and said upper spring cap, a recoil spring compressed between said spring bracket and said lower spring cap, and a toggle link pivotally connected at its joint to the lower end of said hanger rod and pivotally connected at one of its ends to said primary spring and at its other end to said spring bracket, the end of said toggle link which is pivotally connected to said spring bracket holding said hanger rod against lateral swinging movement under the action of said primary spring.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES C. GAMM.
CARL F. NELSON.

Witnesses,
EMILY M. KING,
HARRY D. KILCOUR.

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IN THE
SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, A. D., 1926

No. 325

TEMCO ELECTRIC MOTOR CO.,
Petitioner,

vs.

APCO MANUFACTURING CO.,
Respondent.

BRIEF FOR RESPONDENT

GENERAL STATEMENT

The Record.

The record in this case is materially different from the record in the K-W case in the Sixth Circuit. The K-W record did not contain certain prior art, the judgments and records in interference proceedings before the Patent Office and the Court of Appeals of the District of Columbia between petitioner's patentees Thompson & Thompson and respondent's patentee Storrie, and other material evidence.

The record at page 285 and petitioner's brief at page 36 contains illustrative charts the correctness of which we challenge in that they contain statements purporting to be

expressions of the Court of Appeals of Sixth Circuit, whereas no such statements were ever made by that Court and certain of such illustrations and structures were not before that Court.

The transcript of the record for some unexplained reason does not contain the patent in suit but we have in this brief described the plaintiff's devices and set forth the claims as well as claims which the patentees cancelled during prosecution of the application, together with illustrations of the prior art and a chart used by petitioners in the K W case.

Prior Suits in Sixth Circuit.

The K-W case.

Plaintiff's counsel set out in the index and otherwise in their brief a number of suits brought by plaintiff against others in the Sixth Circuit. The only case in which a real contest was had is the case against the K W Company. Even in that case the defendant was a former sales agent for the plaintiff; had in the agency agreement admitted the validity of the Thompson patent and had engaged in gross unfair competition. Mr. Justice Clarke sustained the patent with "misgiving" (page 348 of the K-W Record), and said that

> "Defendant avowedly started out not to patent an invention but to invent a patent, and as is usual in such cases the result is an infringement and not a discovery. To this it should be added that a device avowedly worked up to evade a patented article to which the persons claiming under it sustained the relation which the defendant sustained in this case to the device of the plaintiff, should not be weighed in golden scales for the purpose of discovering merits to save it from being considered an infringing construction."

In that case the equities were such that on the final accounting (283 Fed. Rep. p. 873), the Court of Appeals of

the Sixth Circuit decided that a penalty of $50,000 for punitive damages "is not a sufficient award for these purposes. We think it should be increased to $100,000."

Mr. Justice Clark had before him an incomplete or limited showing of the prior art but even with that limited art he was evidently undecided as to whether the Thompson patent on its very narrow claims involved the slightest amount of invention. His final conclusion was that "Upon the whole, though not without misgiving," the patent was valid.

The Circuit Court of Appeals of the Sixth Circuit decided specifically that "It is a narrow patent, but it involves invention and is valid."

As we shall hereinafter show the infringing K-W shock absorber was the specific device of the claims of the patent in suit. Neither the District Court nor the Court of Appeals of the Sixth Circuit specially analyzed the claims.

Forest City case.

This case never went to the Court of Appeals. The financial embarrassment of the company and its eventual bankruptcy hampered a proper defense of that case. There was a stipulation between the original counsel for the Forest City Company and counsel for plaintiff that the trial of the case should await the decision of the Court of Appeals in the K-W case. When the suit did come on for trial it was defended largely, if not wholly, on the issue of prior use of a "J. M." shock absorber.

Halladay case.

Halladay never defended that suit. The suit was brought against Halladay and one of his dealers, Brown, in Toledo, and Halladay elected not to defend the suit. He afterwards adjusted the matter with the Temco Company. The decree against Brown, his dealer, was there-

fore largely a default decree. No appeal was taken in this case by Brown or Halladay.

The Pennsylvania Rubber Co. case.

The injunction issued in this case is erroneously or incorrectly entitled as against the Apco Company (Record, page 270). This case was never contested and an examination of the formal record which plaintiff's counsel made in that court (page 316 of record) shows that in view of the fact that Pennsylvania Rubber Company did not defend the case, Judge Westenhaver specifically stated that the **decree to be entered should have carried into it the showing "that the defendant does not appear at this hearing either in person or by counsel."** Plaintiff's counsel came into Court with the decree already prepared (page 329 of the record).

Cooper Rubber Company case.

This is another suit brought against a dealer. No defense was made and a decree taken by default. We are advised the Cooper Rubber Company sold about twenty five (25) sets of Apco absorbers.

Belknap Hardware Company case.

This suit was also uncontested and a decree therein was entered by default. The Belknap Company, we understand, settled for approximately $200.

Tennessee Mill and Supply Company case.

This was also a default or consent decree, that Company selling between twenty five to fifty sets of absorbers.

Conflict of Decisions.

The findings of the Courts of the Fifth and Sixth Circuits are in agreement in respect of the narrowness of the

Thompson patent on its face and with relation to the prior art. The Courts of the Sixth Circuit did not specifically analyze or deal with the claims of the patent in suit, but in holding the patent valid, the Circuit Court of Appeals did not except Claim 3 and we assume that because of the apparent conflict of the decisions of the two Courts of the Fifth and Sixth Circuits, because of the finding of the Court of Appeals of the Fifth Circuit that Claim 3 is incomplete and invalid, this Honorable Court issued its writ of certiorari. On the question of infringement hereinafter discussed, there is no conflict between the Courts of Appeals of the Fifth and Sixth Circuits. Not only did the Court of Appeals of the Sixth Circuit exclude the radius link absorber as being an infringement of the Thompson patent but the petitioner **contended before that Court and before the Patent Office**, where it was seeking a patent on the radius link absorber before it knew of the application of Mr. Storrie for the radius link absorber, that such an absorber **was not an infringement of the patent in suit.** As we shall show it was only after petitioner in the interference proceedings had failed to obtain a patent and had failed to obtain a license under the Storrie patent (Respondent's licensee) that it conceived of the plan of changing its heretofore clearly expressed position on the Thompson patent and eight years after its patent had been sustained in the Sixth Circuit, bringing suit against respondent for infringement, and then only because it had surreptitiously copied the respondent's device under an assumed name of "Edward Bros." and sought by this suit to lend some color of right to its unjust conduct.

THE PATENT IN SUIT.

The patent drawings show, and the specification describes a shock absorber comprising essentially a coiled spring mounted for compression by movement of the leaf spring, the axle and body of the automobile, to absorb

such vibrations and shocks as ordinarily without the relatively sensitive coiled spring would be transmitted from the leaf spring to the body. Referring to the drawing of patent in suit (Plaintiff's Ex. 7, not in record):

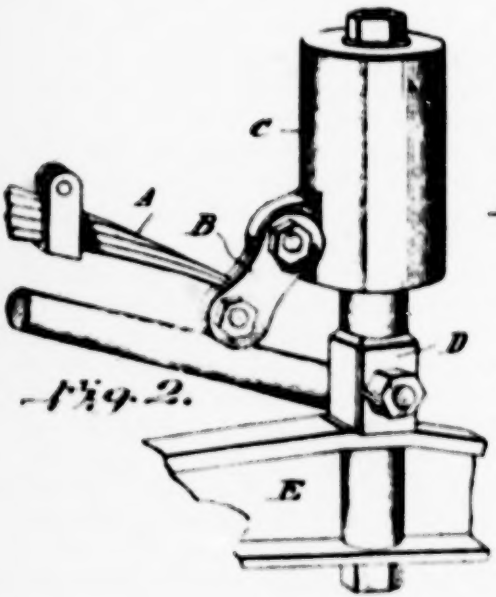


Fig. 2.

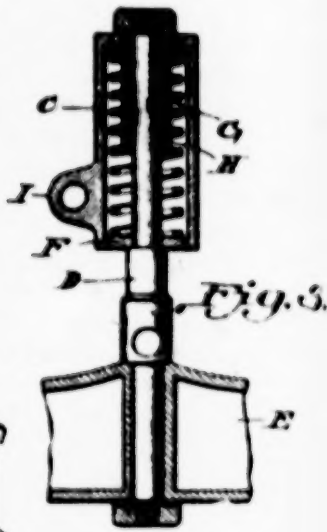


Fig. 3.

Ordinarily at the front axle E, instead of the vertical post or guide D, there is provided in the Ford car a similar post or stanchion D to the upper end of which the links or spring shackles B connect and the same is true of the rear axle except the post D as specified in Claim 4 is fastened to the brake housing which is fixed to the end of the rear axle. Thompson mounts on the vertical pin or guide D a coiled spring G, the upper end being guided by the sleeve H which is fitted to slide up and down on the guide D, the spring G being confined between a washer F at its bottom and the flange of the collar or sleeve H at its top. Also mounted to slide upon the guide or vertical pin D is a

heavy casing or hanger C, the guide D being provided above this casing with a nut engaging the top end of the guide whereby the coil spring will be placed under the desired initial tension. The hanger C is provided with a lug or ear I with which the links or spring shackles B of the car make connection. It will be seen that there is thus interposed at the leaf spring connection with the car a yielding coiled spring instead of merely the ridged or unyielding links B.

It was supposed by the patentee that in this construction under the operation of a load imposed by shock or vibration upon the shackles B, the hanger C would be drawn downward upon the guide D thereby causing the coil spring G to absorb to the limit of its capacity such shocks or vibrations. In other words the coil spring being the weaker or more sensitive spring of the two it would quickly respond to and tend to absorb the slight shocks and vibrations which the leaf spring will not absorb. But the patentee found that when a load was placed upon the shackles B the hanger C was cramped or thrown sideways so that it imposed very considerable friction between the hanger C and the washer F at the lower end, and between the collar or sleeve H and the guide D at the upper end.

Thompson appreciated this difficulty and only three months after the patent issued he applied for another patent on coiled spring shock absorbers in which the friction was done away with by eliminating the friction forming sliding guides of the patent in suit. We shall hereinafter discuss this second Thompson application.

The Claims.

The four claims of the patent are:

1. In Automobile construction, the combination of a non-rotating axle for the ground wheels, of pins or slides attached to and upwardly projecting from said axle, slid-

ing members for said upwardly projecting pins or slides, and a coiled spring interposed between the axle and the sliding member, leaf springs arranged transversely of the car and above the axle and attached at their middle portion to the chassis frame and linked at their outer ends to the sliding members.

2. In Automobile construction, the combination with the axle of the ground wheels, of stems attached thereto and upwardly projecting therefrom, the said stems acting as guides for the vertical movement of enlarged sleeves fitted through an opening in their top to said stems, coiled springs surrounding said stems, said coiled springs being enclosed within said sleeves and adapted to support their downward thrust, shoulders on said stems upon which said coil springs rest, and leaf springs supporting the chassis frame in their mid-length with their outer ends attached to said sleeves, all as substantially shown and described.

3. In Automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to the road wheels, the combination of upright stanchions with the axle of the ground wheels, said stanchions being attached to the outer ends of said axle, leaf springs extending above the axle and between the stanchions, and supporting the chassis frame, the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame, hangers for the outer end of said leaf springs, said hangers having a vertical movement and being guided therein by said stanchions, and coiled springs interposed between said leaf spring hangers and said axle of the ground wheels.

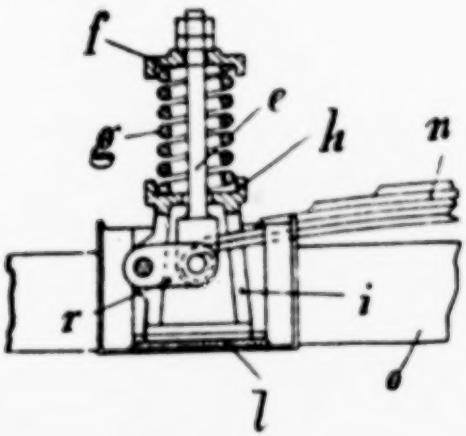
4. In an Automobile, the combination with a leaf spring, a stationary guide on the stationary end of the axle flange adjacent to the rear brake drum and a sliding hanger

..dapted to slide on the said stationary guide, a coiled spring adapted to yieldably support said hanger, the said hanger being adapted to carry the end of the leaf spring.

THE PRIOR ART.

Petitioner's patentees were compelled to narrow their claims down to the specific device of the drawings in view of rejections based on the prior art, that prior art did not include the devices hereinafter referred to but it was sufficient to show that there was no room for anything other than a patent on the specific disclosure. This record shows numerous instances of shock absorbers employing a sensitive coil spring in combination with the more resistant leaf spring usually employed on vehicles for absorbing the wheel shocks.

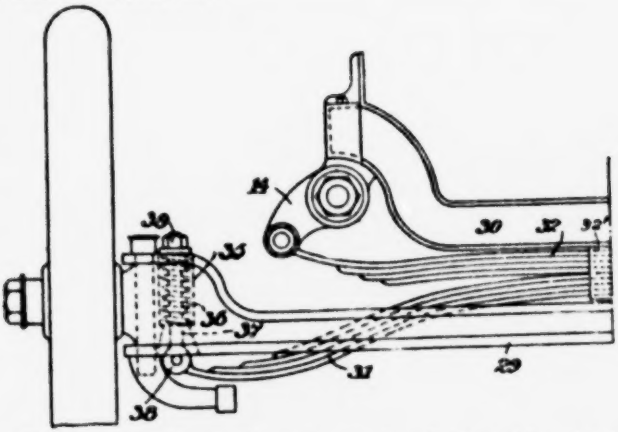
Bussing Patent 3385 of 1907:



The leaf spring is indicated by the reference letter n, being the usual arrangement. The center of the springs being connected with the axle and the ends of the springs

being connected by shackles to brackets which extend from the chassis. With the Ford car, the center of the spring is connected to the body of the car and the ends of the springs being connected by shackles to the axles. If figure 1 of the Bussing patent be turned upside down, as shown, it will illustrate the Ford arrangement, assuming the chassis o to be the axle and the spring n to be connected to the body. The Ford arrangement, in other words, is simply the usual arrangement turned upside down, the springs extending crosswise of the car at each end instead of lengthwise thereof. With the Bussing patent, the ends of the leaf springs **n** are connected by links r to rods e, having washers f thereon, the position of which may be adjusted by nuts appearing on the lower ends of the rods e. Between the washer f and the bracket **h** is a coil spring g. The fore and aft strains which are imposed upon the spring are taken care of by radius links r. It will thus be seen that the weight of the chassis rests upon the coil spring g, thence upon the washer f, and finally the ends of the leaf spring n. In other words, the leaf spring will be connected to the chassis through the intermediation of coil spring shackles in precisely the same way, so far as the broad principle is concerned, as with the Thompson patent in suit. When small rapid shocks are encountered with the construction of the Bussing patent, the leaf spring acts practically as a rigid element and these shocks, instead of being communicated to the body or chassis, are absorbed by the coil springs.

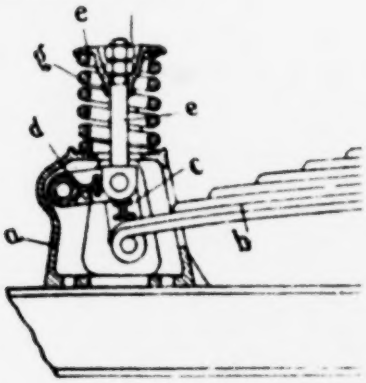
Anger Patent 1,031,612:



This is merely another example of the old principle of connecting the ends of a leaf spring to the axle or chassis of an automobile by means of a quick acting coil spring.

The broad claims of petitioner's patent were rejected on references including Anger, and rejection acquiesced in without appeal and were cancelled and the narrower claims of the patent substituted.

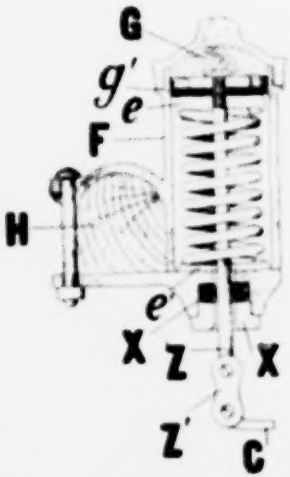
German Patent 227,226 of 1909:



The support or bracket **a** is mounted on the chassis and has pivoted to it the radius links **d** which connect to the spring shackles **c** and the end of the rod e. Between a cap or washer e' at the opposite end of the rod e and the support a is interposed a coil spring g. The leaf spring b connects with the shackle links c.

This patent was not before the Court of Appeals in the Sixth Circuit.

Williams Patent 203,863:



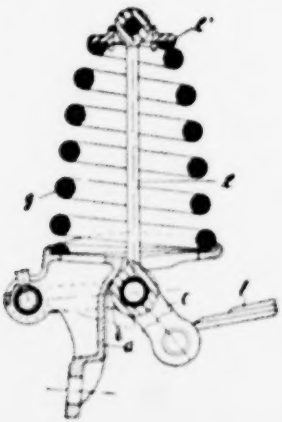
The patent shows a shock absorber fastened to the side bar H of the axle of a horse drawn vehicle. The leaf spring C of the body of the vehicle connects by means of shackle links Z' to the hanger Z the top of which is provided with a discs or washers e and g'. The hanger Z and the discs e and g' slide in the casing F. Between the top disc e and the bottom disc or washer e' is a coil spring.

This patent was before the Court of Appeals of the Sixth Circuit.

RESPONDENT'S SHOCK ABSORBER.

The respondent's shock absorber is made under the patent granted to William Storrie as the result of an award of priority of invention in an interference between the petitioner's patentee Thompson, J. A. Williams of the K-W Ignition Company, one Voight of San Francisco, and Storrie of the respondent's company, Apco Manufacturing Company.

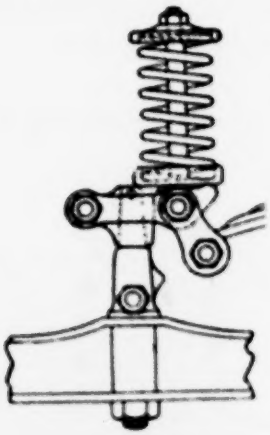
The Storrie-Apco absorber is here illustrated:



The support **a** has pivoted to it the links **d** to which in turn at their opposite end are pivoted to the lower end of the rod **e** the top of which has the washer **e'** resting on a "bee hive" coil spring **g** which is supported at its broad base on the member **a**. The shackle links **c** connect the rod **e** with the leaf spring **f**.

The advantage of this construction is that the coil spring is utilized in such a way that no sliding guides are necessary to keep the coil spring from displacement and consequently there is generated no friction to "dampen" or retard the action of the spring.

This device is known as the "radius link" absorber and with the exception of the shape of the coil spring it is identical with the design of the second Thompson absorber of the interfering application of Thompson. An illustration of the Thompson radius link absorber is here shown:



THE STORRIE-THOMPSON INTERFERENCE.

Three months after the patent in suit issued, Thompson applied for a patent on the radius link shock absorber shown above. The Patent Office cited the patent in suit against this radius link absorber and petitioner's counsel herein, responding to the citation said (respondent's exhibits 7, and 28):

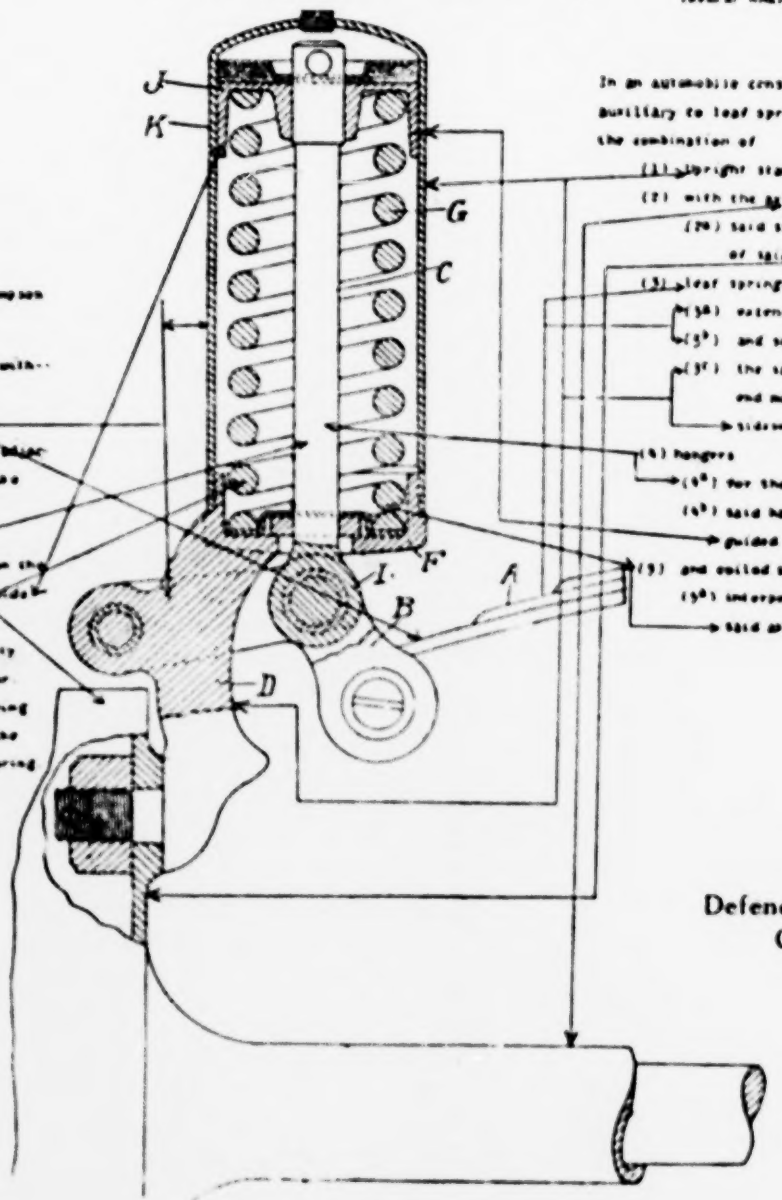
> "The difference between the mechanism and functional result of the present case (radius link absorber) and the former Thompson patent is obvious."

Several claims were then allowed to Thompson in his second application, of which the following claim is typical:

> "In a vehicle spring suspension device, the combination, with an axle, a support secured thereto, and a

Complainant's Infringement Illustration.
Defendants Attachment

K-W-Ignition Company



Patent In Suit

Tabular Analysis of Claim 5 of Thompson Axle Attachment Absorber

In an automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to the road wheels, the combination of

(1) uprights or stanchions,

(2) with the axle of the ground wheels,

(2a) said stanchions being attached to the outer ends of said axle,

(3) leaf springs

(3a) extending above the axle and between the stanchions

(3b) and supporting the chassis frame

(3c) the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent sideway of the chassis frame,

(4) hangers

(4a) for the outer ends of said leaf springs,

(4b) said hangers having a vertical movement and being guided thereon by said stanchions

(5) and coiled springs

(5a) interposed between said leaf spring hangers and said axle of the ground wheels

Patent In Suit

Tabular Analysis of Claim 4 of Thompson Axle attachment Absorber

In an automobile, the combination with--

(1) a leaf spring

(2) a stationary guide--

(2a) on the axle flange bolted to the rear brake drum

(3) and a sliding hanger--

(3a) adapted to slide on the said stationary guide

(4) a coiled spring--

(4a) adapted to yieldably support said hanger

(4b) the said hanger being adapted to carry the end of the leaf spring

Defendant's Exhibit 4 Plaintiff's Chart in K-W Case.

radius link pivoted to said support, of two classes of springs arranged substantially in the plane of said axle, one being a substantially horizontal leaf spring and the other a coil spring substantially in the vertical, the former connected to the radius link and the latter carrying a rod connected to the radius link and supported by said support."

At the time petitioner made this admission in the second Thompson case, it was not aware of Mr. Storrie or his application for patent for the radius link device. The petitioner had abandoned the device of the patent in suit because of its substantial inoperativeness due to the fact that the spring shackles connected to the side of the casing-hanger pulled the casing to one side and cramped it against the vertical pin or guide rendering the coil spring largely non-responsive; due to the resultant friction of the parts.

The claims of the second Thompson application on the radius link absorber formed the counts of the interference and were awarded to Storrie by the Patent Office and the Court of Appeals of the District of Columbia.

THE K-W INFRINGING ABSORBER.

We attach opposite this page an illustration of the shock absorber that was held by the Courts in the Sixth Circuit to infringe the patent in suit. This cut is a copy of the chart used by petitioner in that case.

It will be seen that no reference to the radius link appears on this chart but that the vertical guide and hanger of the claims of the patent are indicated by the heavy fixed casing and the disk or plunger at the top of the guide.

There was introduced on the trial of the case as an Exhibit by the respondent a certified copy of pages 186, 187 and 188 from the transcript of the proceedings on the trial

of the K-W Ignition case before Judge Clarke. From this certified copy we quote as follows:

> "Mr. Thurston (Counsel for the K.-W. Ignition Co.): Now, I desire to offer in evidence certain depositions which were taken in the Storrie matter, which has been stipulated in, subject to objection, taken in the interference proceeding, the depositions to prove the invention by Storrie of the radius link characteristic. * * * That is, if there is anything in the radius link—which is outside the patent. * * *
>
> "The Court: Is there any objection to this?
>
> "Mr. Toulmin: (Counsel for plaintiff, The Temco Co.): Yes.
>
> "The Court: Is it claimed for the patent in suit that it includes this link? (The radius link).
>
> "Mr. Toulmin: **No, sir,** but the patent in suit is represented by the defendant's device and the complainant's device, **with the radius link added to these commercial structures** shown as the defendant's device and to our later form by ourselves. * * * Now, Brother Thurston, as I understand him, was introducing this Storrie testimony for the purpose of establishing the date for possession of the radius links by Storrie prior to the time that we possessed them. That is not an issue here * * *".

That this position taken by the petitioner in the K-W case is consistent with its attitude toward the patent and the K-W infringing device, throughout the trial of the case, is apparent from the following testimony appearing at page 35 of the record in the K-W Ignition case, filed herein as plaintiff's Exhibit 14, in which the cross-examination of petitioner's own expert produced the following:

> XQ. 13: "In defendant's device what do you regard as the hangers, which are guided vertically as specified in the latter part of **claim 3**? A. The part to be coupled to the end of the leaf spring and comprising **the rod**

so coupled, **and the disk on the upper end of the rod, which parts are guided in the fixed casing.**"

And to show that the petitioner regarded claim 3 as being the same in scope as the other claims, and particularly the same as claim 4, we quote petitioner's expert's testimony on cross-examination further:

> XQ. 15: "In defendant's device what do you regard as the sliding hanger which is adapted to slide on the stationary guide, as specified in claim 4? A. The **disk** which slides **in** the fixed guide and which hangs on the upper end of the coil spring and which is intended to be connected by the spring rod to the end of the lead spring."

Turning to pages 94 and 95 of the K-W Ignition Company record, we find Mr. Toulmin, counsel for the petitioner, cross-examining defendant's expert and the court making certain observations as follows:

> XQ. 25: "Then, if the sliding casting is guided by the cap, why is not the upper part of the spring also guided, seeing that the top of the spring end and the casting are in contact and under pressure? A. There would be some guiding there, but it would not be a guiding action which would support indefinite alignment of the parts, due to the fact that they are not mechanical fits, not mechanically arranged for guiding functions.
>
> XQ. 26: "**Aside from anything like hair-splitting, you would say 'yes,' would you not, to the question that the upper part of the cap guides this casting to which the spring or against which the spring is in contact in use? A. Yes, due to the fact that it has a dash-pot** (Note: The packing washer on the casting to trap the air on upward movement, as in a door check) **piston.**
>
> XQ. 27: "The dash-pot function that you have described or referred to is not included in my question. **I want you to confine yourself to the single proposition**

whether or not the casting which travels in the upper part of the casing is guided by the casing and the spring, being in firm contact with the casting is also guided.

The Court: "**That is the last time this question will be allowed, and we want a plain, frank answer.**

A. "The casting is guided in the cylinder and, in so far as the spring is in firm contact with the casting, it is guided.

The Court: "**Clearly so. It does not take an expert to see that.**"

Further, petitioner's expert, Mr. Nathan, as shown at pages 128 and 129 of the K-W Ignition record, supports this contention of the petitioner. He stated (p. 129):

"Of course, in the defendant's device, there is a slide at the upper end also, **as there is in the device of the patent.**"

and (p. 128):

"The Court: **Is that stanchion integral with the cover in the defendant's device?**

"The Witness: **Yes, your Honor, it is screwed on there. It is for all intents and purposes, an integral part.**"

QUESTION OF INFRINGEMENT.

The defenses of the respondent are:

1. Non-infringement on the face of the claims and specifications.

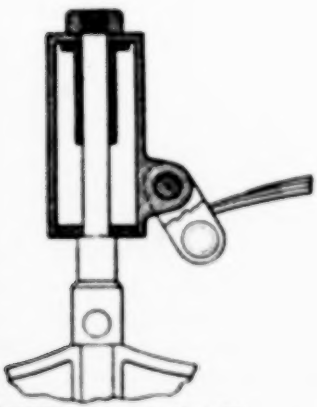
2. Non-infringement of the claims as limited by the estoppel of the file contents, and non invention (established by the decision of the Primary Examiner not appealed from but acquiesced in to obtain the patent and therefore bind

ing) of that for which petitioner now attempts to interpret the claims and non-infringement in view of the prior art.

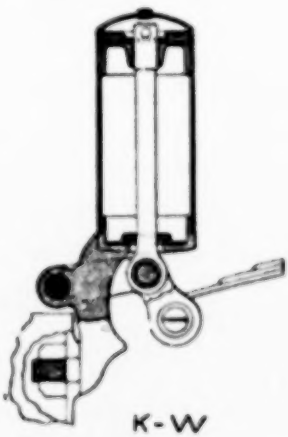
3. Non-infringement of the claims as interpreted in the decision of the Primary Examiner procured by Thompson for the purpose of obtaining a patent on the radius link shock absorber which, however, was awarded respondent's inventor Storrie.

I.

It will be apparent to the court from an inspection of the accompanying illustration that if from either the



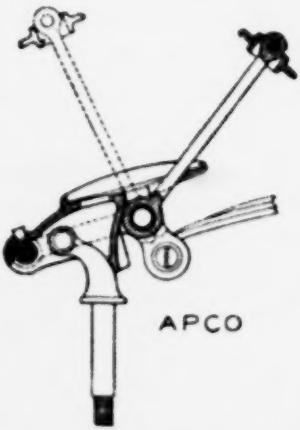
PATENT IN SUIT



K-W

Thompson device of the patent in suit or the K W device held to be an infringement, we remove the coil spring, as shown, and which is a distinct element in the claims of the patent in suit, **the remaining parts still function as guide and guided part just as though the spring had not been removed. That is, the removal of the spring does not affect the relative relationship of the parts nor destroy the guide of the claims.**

Now referring to the illustration of the Apco absorber wherein the coil spring has been removed, **it will be seen that nothing remains to guide the vertical spring link or rod.**



It will thus be seen that in the Apco device the respondent does away with one of the necessary and vital elements of each of the claims of the patent in suit (including claim 3 if we read into that claim mechanism necessary to make it complete), namely the guide for the spring. (See quotations above from K-W record that petitioner and Court regarded these guides as necessary elements in the claims and the infringing K-W structure.)

II.

Petitioner first drew broad claims to the shock absorber but was compelled to narrow them down to the specific device of the drawings. The following claim is one of several that petitioner cancelled before accepting the narrower claims of its patent, in view of the prior art, instead of appealing:

"In an automobile the combination of a series of springs for supporting the frame from the axles, the said series of springs consisting of leaf springs arranged horizontally and coiled springs arranged vertically, said coiled springs being adapted to support the ends of the leaf springs, the said coiled springs being adapted to receive the vertical shocks from the ground wheels and to transmit the same to the ends of the leaf springs lessened to a certain degree by the resiliency of the coiled springs."

This Court will note that petitioner refers to certain broad statements in the specification of the patent in suit. Petitioner cannot broaden its claims of its patent by reference to parts of its specification which was not amended at the time of cancellation of the claims therefor.

In the case of Lehigh v. Mellon, 104 U. S. 112; 26 L. Ed. 639, this Honorable Court said:

"In this case the description of appellant's invention is much broader than his claim. It seems quite clear from the present form of the appellant's specification and from the fact that his application for a patent was twice rejected, that he was compelled by the Patent Office to narrow his claim to its present limits before the Commissioner would grant him a patent. **In doing this he neglected to amend the descriptive part of his specification.** He can not go beyond what he has claimed and insist that his patent covers something not claimed, merely because it is to be found in the descriptive part of the specifications."

This case is particularly in point because the petitioner's brief quotes at great length from the opinion of the Courts in the K-W case, those portions wherein the Court comments upon the general action which the patentee's specifications state takes place in the operation of the shock absorber and the absorption of shocks. The Court will bear in mind that these observations of the Courts in that

case were general observations **predicated upon the specific structure with which they were dealing in finding the patent valid and the claims infringed** and that such descriptive or explanatory statements of the Courts in that case should not be construed, at least under the decision of **Lehigh v. Mellon**, to mean that the presence of such parts in the specification of the patent indicates on the part of the patentee a refutation of his acquiescence in the rejection of the broad claims which were originally drawn or based upon the descriptive part of the specifications.

III.

To find infringement this Honorable Court must ignore the rule that acquiescence in the rejection of a claim when accompanied by the allowance of a narrower claim, estops a patentee from demanding for the claim he got an interpretation which would cover what he was not given.

The patentee Thompson first sought a patent for the broad idea of a coil spring between the end of a leaf spring and the axle (the only place where a shock absorber could connect with the eye of a leaf spring in the Ford car and other automobiles, as fully shown in the prior art as hereinafter discussed). These claims were rejected on the prior art and the claims eventually narrowed down to the claims of the patent in suit, calling for the upstanding fixed pins as vertical guides of the patent. If the broad claims had been allowed it may be that the defendant's shock absorber would infringe. But the claims were not allowed. They were rejected as being too broad, over the prior art cited which showed it was old to employ a coiled spring shock absorber on the end of a leaf spring whether connecting with the axle or the body of the car.

Thompson acquiesced in the rejection by amending instead of appealing and he is thereby absolutely committed

to the claims which he elected to take in his patent. His acquiescence in the rejection of the Patent Office for the purpose of obtaining the patent makes it **res adjudicata**. It cannot be reopened for discussion, for it is foreclosed.

In the case of **Knapp v. Morss**, 150 U. S. 221 (37 L. Ed. 1059), this Court held:

> "A claim in a patent must be interpreted with reference to the rejected claims and to the prior state of the art, and can not be so construed as to cover **either** what was rejected by the Patent Office **or** disclosed by prior devices."

It is only necessary for the Court to see that the original claims were rejected, and that, instead of appealing, the applicant amended to avoid the rejection. It is immaterial whether the rejection was for complete anticipation by a single reference or for lack of invention in view of two references. The essential fact is not denied here, that there was a rejection and that to avoid this rejection the claims were limited by amendment instead of appealing. If, however, we go into the unnecessary consideration of the reference, it will be found that respondent's construction is, in fact, more nearly like that of the prior art as will be apparent from examination of the prior devices hereinbefore illustrated, than like the Thompson patent in suit.

Estoppel of the File Contents of a Patent Cannot Be Neutralized by the Doctrine of Equivalents.

Yates vs. Smith, 271 Fed. 33 (C. C. A. 3rd); **D'Arcy Spring Company vs. Marshall**, 259 Fed. 236 (C. C. A. 6th):

> "We think the conclusion must follow that **the expressly stated limitation cannot be overcome by applying the rule of equivalents** and that the patentee intended and understood his monopoly to be confined to a structure in which the springs had the alternate rela-

tionship which he specified. We are confirmed in this conclusion as to his intent by what occurred in the Patent Office."

The radius link feature was not considered an equivalent of anything in the petitioner's device by the petitioner and petitioner's patentee Thompson when he was seeking a patent on the radius link structure, nor by the courts in the K-W Ignition case. Petitioner and the court in the K-W Ignition case regarded it as an **added** feature to the combination which was held to be an infringement of the patent in suit. In the Forest City case reference is made to the radius link structure as having a guiding function in the later device of the Temco Company, but no question of a radius link combination constituting an infringement of the Thompson patent (the patent in suit) was raised or passed upon in the Forest City case.

The petitioner completely ignores the estoppel of the file contents and undertakes to place the infringement of its patent by the device manufactured by the respondent upon the theory that if it is possible in the search of the combined parts of the respondent's device to find what the petitioner chooses to term an equivalent of some other part in the petitioner's patent, then its patent has been infringed. This not being a generic patent, this cannot be true where the devices are different combinations, though they serve the same general purpose. As we have already stated, the patents must be regarded in their narrow and limited scope and any other combination of parts seeking to perform the same general result is a different device dependent upon its own combination. It probably would be impossible to make any device, under the petitioner's theory, intended to accomplish the same purpose in which you could not discover what could be termed the equivalents in the other device. In other words, if the patent is not generic, each one depends upon its own particular combination without

regard to whether these parts perform particular purposes or not.

Indeed, the petitioner's argument shows that the petitioner is driven to the proposition of claiming the radius link (which it had heretofore disclaimed, as appears from the quotation herein set out from the transcript of the record in the K-W Ignition case) as being within the patent in suit, and by some sort of an imaginary method the stationary stanchion or upright pin of the patent.

That the radius links constitute new and different elements with different functions from any contained in the Thompson patent can hardly be disputed unless the Thompson patent at this late date, and contrary to the position assumed by the petitioner and forming the basis on which the court adjudged its validity and found infringement in the K-W case, is to be given an extremely broad and liberal construction such as is given only to pioneer patents. That this is true is evidenced by the fact that the patentee of the patent in suit himself so regarded it and did not consider that it was covered by his original patent when he applied for a new patent on a new combination employing the radius link. If he thought that it was a mechanical equivalent of what he already had, he did not need a new patent. If it was in his opinion not a mechanical equivalent (and he so stated in his second application, defendant's exhibit 7, page 28 thereof, Thompson-Storrie interference record) then he had a right to apply for a new patent, which he did.

In support of this proposition we respectfully call attention to what this Honorable Court said in the well considered case of **Miller vs. Eagle Manufacturing Company**, 151 U. S. 186, where the second head-note is as follows:

> "No patent can issue for an invention actually covered by a former patent, especially to the same pat-

entee. Although the terms of the claims may differ, in such case the second patent is void."

And (ninth head-note):

"A single element or a function of a patented invention can not be made the subject of a separate and subsequent patent."

The case just cited clearly points out that where the patent is merely for a combination of old elements, the patent must be strictly construed to cover only the combination patented, and that if there are new elements introduced into a new combination employing some or many of the same old elements covered by the original patent, then the new patent is for a different combination and does not infringe the first patent. In support of the fact that the radius link combination structure was considered by every one, up to the time it was necessary for the petitioner to view it otherwise, as a different combination employing a different element, we call the Court's attention again to the fact that all of the authorities in the Patent Office, as well as the Court of Appeals of the District of Columbia, so considered it in bringing the second Thompson application into interference with the Storrie application and in finally awarding a patent to Storrie, notwithstanding the fact that the first Thompson patent, the one in suit, was before the patent authorities and considered by them throughout the interference proceeding. (Defendant's Exhibit 7.)

Not until confronted with the necessities of this case—a suit brought after eight years' delay and after failure to obtain a license from Storrie under the radius link patent; in the face of the position assumed by it before the Patent Office that the radius link structure was not an infringement of the patent; the position assumed before the Courts in the Ohio litigation that the radius links were an addition to the K-W device that otherwise had every element of the

limited claims of the patent in suit,—did the petitioner seek to give to the claims a scope inclusive of the very structures it had disclaimed in order to obtain the patent at all.

As To Claim Three.

No one may read into a claim an element not contained in it.

Deering vs. Winona, 155 U. S. 286.

Again, when a claim is lacking in mechanism or describes a function without indicating the manner of construction or the arrangement or connection of the parts the claim must be restricted, if held valid, to the particular mechanism.

Burr vs. Duryea, 1 Wall. 320;

Merrill vs. Yeomans, 94 U. S. 568.

Nor can the patentee resort to general or vague or ambiguous expressions in the claim to make out a case of infringement. As this Court in the case of **Cimotti vs. American**, 198 U. S. 399, said:

> "In making his claim the inventor is at liberty to choose his own form of expression, and while the courts may construe the same in view of the specifications and the state of the art, it may not add to or subtract from the claim."

And it is equally true that:

> "As the inventor is required to enumerate the elements of his claim, no one is the infringer of a combination claim unless he uses all the elements thereof."

It does not appear that the question of the incompleteness of claim 3 was ever presented to or considered by the Courts in the K-W case in the Sixth Circuit, or in any other case, or that those Courts ever specifically considered claim

3. The patent was held to be valid generally without any special analyses of the several claims. The infringing structure, as we have pointed out, was identical with the device which the petitioner had been manufacturing under its patent and which the K W company had been selling for the petitioner. The District Judge in the K W case stated that he was not without misgiving in sustaining the patent and the Court of Appeals of that Circuit held that the patent was a very narrow one. It was unnecessary for the Court to find infringement of the claim 3 of the patent. Admittedly the K W device was within the terms of claims 1, 2 and 4 of the patent. Assuming that claim 3 was considered by the Courts of the Sixth Circuit, it is not unreasonable to assume that they gave to the claim in question a construction not inconsistent with their findings that the invention was a very narrow one and that the patent must be narrowly construed. It must at least be admitted by the petitioner that claim 3 was not considered broad enough by the Courts in the K W case to include the radius link device because, the Court of Appeals of the Sixth Circuit recognized that the petitioner was not entitled to the radius link device and that the radius link device was conceded to Storrie and was not considered an equivalent of the sliding hanger of the Thompson patent in suit.

We call the attention of this Honorable Court to the fact that the opinions of the Circuit Court of Appeals of the Sixth Circuit do not mention claim 3.

In the Court of Appeals, Fifth Circuit, petitioner cited in support of its contention that claim 3 was complete and not functional, the case of **Winans vs. Denmead**, 53 How. 330. The Winan claim was upheld by this Honorable Court but a reference to the opinion in that case will show that Winan's claim clearly defined apparatus to support the closing functional statement of the claim, whereas in claim 3 of the petitioner's patent there is an attempt to claim, as

the Court of Appeals of the Fifth Circuit said, "the movement of a machine irrespective of the mechanism which causes it."

A reading of claim 3 and a comparison thereof with the specification and drawings of the patent will show that the claim is clearly incomplete and functional. It remains to be said that this is not surprising in view of the fact that patent specifications and claims were drafted by the inventor himself without the assistance of a patent attorney.

The question, however, is academic for even if claim 3 be considered complete it is limited by its terms and the prior art to the specific structure of the remaining claims. Both the Sixth Circuit Court of Appeals and the Fifth Circuit Court of Appeals have found the invention to be a narrow one and the claims not open to such a range of equivalents as would include the radius link structure.

Estoppel by Thompson's Admissions in the Second Application on Radius Link Combination.

In discussing the estoppel by the file contents we have quoted decisions reiterating the legal principle that where the applicant for the purpose of obtaining his patent limits his claims by amendment, he cannot subsequently repudiate such limitations. By the same token an inventor cannot subsequently repudiate a limiting decision of the Patent Office procured by him in seeking application for another device when his first patent is cited against him. Yet this is precisely what plaintiff has attempted here. For the purpose of obtaining a patent on the radius link construction Thompson procured a decision by the Patent Office that the claims of the Storrie patent were for a combination "obviously different in mechanical construction and functional results." Petitioner's counsel seek to overcome the fact of

Thompson's admission before the Patent Office in the second Thompson application that the radius link combination was entirely different in mechanical construction and functional results from the original Thompson patent by stating that the radius link device is mentioned in the specification of the second Thompson application as relating to an improvement over the construction disclosed in the Patent in suit.

As a matter of fact the quotation from the specification of the second Thompson application has just the opposite meaning from that which plaintiff's counsel seeks to get from it. Thompson said that the radius link device related to an improvement "**over**" the construction disclosed in the patent granted to himself. He did not say that it was an improvement **upon** or **in** the device of the patent in suit. **The clear intention of the applicant in this second application was to advise the Patent Office that he was seeking a patent for something over and above the original Thompson device; that it was entirely new and distinct.** If he were seeking a mere improvement upon the original Thompson device he would have said so and he would have formed his claims differently, rather than form his claims into the combinations he submitted. He put no claim in the second application for the mere radius link as applied to his original device **and the emphasis with which he asserted before the Patent Office when it cited the original Thompson patent against him, that the radius link construction was obviously "different in mechanical construction and functional results" shows that he did not regard it merely as an improvement upon the Thompson patent or he would have said so in replying to the Patent Office letter.**

K-W Company and Storrie Licenses.

The Apco Company not only never granted a license under the Storrie Patent to the K-W Company but the tes

timony of Storrie and Wilson of the Apco Company shows that the respondent had no interest in the K-W Company, directly or indirectly, and that the two companies are competitors in the manufacture of accessories for automobiles. Mr. Storrie did grant a license to the K-W Company as his testimony shows, but this license was limited to the use of radius links **with the construction** of the K-W Company absorber using the sliding guides and that K-W did not have any right to use the radius link combination as it is used by the respondent.

We do not believe that the Court will be materially concerned with the various statements, direct and by inference, made in the petitioner's brief to the fact that Mr. Keller, who is now of counsel with the respondent, was of counsel in the K-W case, Penn. Rubber case and the Forest City case. Mr. Keller was retained by Judge Day only on the accounting in the K-W case and in the Forest City case and both Judge Day and he withdrew from those cases before they were completed. Mr. Keller took over the rights in the Storrie patent only as part payment of legal fees, and returned it to Mr. Storrie but Mr. Keller was not aware at that time of the prior radius link Bussing patent hereinbefore described. We think the Court is not interested in any of these matters and that indulging in any controversy about such matters would not be helpful to the Court. It is sufficient to say that the defendant in this case has never been a party to any of those cases.

New York-Atlanta, October 5, 1927.

Respectfully submitted,

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MOSELEY ARTHUR KELLER.
Counsel for Respondent.

SUPREME COURT OF THE UNITED STATES.

No. 37.—October Term, 1927.

The Temco Electric Motor Company, Petitioner, vs. Apco Manufacturing Company.	On Writ of Certiorari to the United States Circuit Court of Appeals of the Fifth Circuit.

[January 3, 1928.]

Mr. Chief Justice Taft delivered the opinion of the Court.

The Temco Electric Company, a corporation of the State of Ohio, filed this bill in equity against the Apco Manufacturing Company, a corporation of the State of Rhode Island, charging that the Apco Company had wronged the Temco Company by infringement of a patent for a shock absorber fitted for a Ford motor car, issued to Ralph P. and Wm. S. Thompson, assignors of one-third to Oliver P. Edwards, and assigned by them to the Temco Company and owned by it. The Apco Company answered denying the validity of the patent and its infringement, averring that it was inoperative and that the shock absorber which the Apco Company was making was made under a patent to one William Storrie, applied for March 18th, granted September 17, 1918, and numbered 1,279,035. The answer further set out the names of certain patents which were said to be anticipations of the patent upon which the suit was brought.

The district court held that the patent was a very narrow patent, and that claim No. 3 was invalid because it lacked words of description enough to make it operative. Deferring, however, to the decision of the district judges and of the Circuit Court of Appeals of the Sixth Circuit, it sustained the three claims of the patent but declined to grant a preliminary injunction. Though of opinion that the infringement had not been shown, nevertheless it entered a decree in favor of the appellee out of deference to two decisions of the Circuit Court of Appeals, *K-W Ignition Company v. Temco Electric Motor Company*, 243 Fed. 588, and the same

case reported again in 283 Fed. 873. The Circuit Court of Appeals of the Fifth Circuit declined to follow the two decisions, of the Circuit Court of Appeals of the Sixth Circuit, and reversed the judgment of the district court. There had been a cross appeal brought by the appellee to reverse the district court in its holding that the third claim was invalid and that cross appeal was denied, (11 Fed. (2d) 109). The case has been brought here by certiorari. 271 U. S. 653.

The patent sued on was issued to Ralph P. Thompson and William S. Thompson, of Leipsic, Ohio, assignors of one-third to Oliver P. Edwards, of Leipsic Ohio. The application was filed October 10, 1912, and the patent was issued September 9, 1913, and numbered 1,072,791, and has since been assigned by the patentees to the Temco Company. The object of the patentees was to provide a shock absorber which would make riding in an automobile easy. They professed to accomplish this by supplying a set of quickacting coiled springs in connection with the set of slowacting and friction-retarded leaf springs originally built into the vehicle. The compression and recoil of the two sets of springs occurred at different times, in consequence of which their respective pulsations were not synchronous. The result was said, in the specifications, to be that the shock to the road wheel and axle was first absorbed by the coiled spring, and therefrom was transmitted to the body of the car and to the occupants through the slowacting leaf spring. As the compression and recoil of the leaf spring were not the same as those of the coiled spring, the recoil of the coiled spring began to take place before the full effect of the shock to the road wheel could be transmitted through the leaf spring. This see-sawing action, as it were, between the quickacting coiled spring and the slowacting leaf spring, the specifications said, caused a large portion of the effect from vibrations to be nullified by the action of one and reaction of the other of these springs taking place simultaneously, thus absorbing within the spring element the sharper vibrations. The device was intended to be specially adapted for attachment to Ford automobiles. Its availability was claimed to be such that the owner of a Ford car, without the services of a mechanic and without disturbing the operation or construction of the car, might, with slight instruction, remove the usual hanger which supported each end of each leaf spring and insert in its stead the plaintiff's attachment.

The absorber consisted of an upright metal guide, whose lower end was rigidly attached to the car axle, and provided a platform for the lower end of a coiled or torsion spring, inclosed in a cylindrical metal casing or hanger, bearing against and supported by the upper end of the coiled spring, and so was capable of upward and downward sliding movement on the guides, the stanchions or guides being adapted to maintain the vertical direction of the sliding movement of the absorber or torsional spring, and to limit the end movements of the leaf springs along the axle.

When the patent was issued there was a great demand to purchase the device and use it, and under the patentees, or under the K-W Ignition Company, which had a contract with the patentees, there were made and sold upwards of 134,000 sets of the shock absorbers, and about $2,250,000 was from time to time paid to the patentees for these absorbers, so that from 1912 for ten years or more a very large business was done in the sale and use of the patented device. There was litigation over it, especially in the districts of the Sixth Circuit, where the validity of the patent was generally sustained, the first case having been heard by a former Justice of this Court while a district judge of the Northern District of Ohio. His opinion is recorded in the record. The case involved not only the validity of the patent, which after some hesitation he sustained because of its general adoption and success, but also presented a question whether the defendants in that case, the K-W Ignition Company, were not so bound by contract with the patentees as to estop them from defending against the patent. The district judge held, however, that the contract had expired and the obligations growing out of it had also expired, so that the issue tried was that of the validity of the patent. The district court's decree was affirmed by the Court of Appeals and the case was sent back for an accounting and an accounting was had against the defendant in that case and a judgment given for $292,938. against the K-W Ignition Company, which was a defendant there. In the present suit the bill set up this litigation in Ohio as evidence of the validity of the patent, but a straight issue of validity was also made and all the defenses known were advanced.

The district judge in Ohio in the *K-W Ignition* case was affected in his decision, that the Thompson patent involved invention, by the way in which the public eagerly took it and its marked

success, and so, indeed, was the Circuit Court of Appeals of the Sixth Circuit. So are we.

The attack now made upon the patent is that it has been proved to be ineffective and ten years' actual use results in some injuries to the shock absorbers by striking of the parts of the motor machine against the metal guides and cylindrical metal hangers in which the torsional spring is moved up and down. It appears that the real owners of the patent, realizing that there were defects in the operation of the absorber that should be remedied, applied to the Patent Office for a patent which should substitute for the stanchions or guides, on which the hanger around the torsional spring moved up and down in a vertical direction, a fixed radius link. The torsional spring of the patent enclosed within the casing or hanger attached to the upright guide did not, in moving or sliding up and down, retain a vertical direction but was sometimes tilted over by the weight of the car and its load. The change proposed, in regard to this, was that while the spring should be placed outside the upright or stanchion at the bottom of the spring the upright stem or guide or stanchion inside the spring should be maintained in a vertical position by the addition of a radius link united to another by a toggle joint which fixed the guide rigidly and would hold the coil spring up permanently in a vertical position. This permitted a widening of the coil spring at the bottom so as to make it conical and gave the spring more stability in its vertical position. The difference between a conical coil spring and one that is not conical does not make the two structures different in any respect but in degree of stability only.

The proposal of the plaintiff patentees to remove a defect by the substitution of the radius link for the metal guide and casing and hanger led to an interference proceeding with one William Storrie who claimed to have hit upon this change first, and in that interference proceeding in the Patent Office, Storrie was given a patent for the absorber with that radius link. Except for the radius link there is no difference in operation and result. The springs in a Ford car equipped with the defendant's device receive the shocks in the same order, operate in the same manner and produce the same results as those in a Ford car on which the springs of the plaintiff's patent are used. The function which the casing of the torsional spring and the hanger perform is exactly the same as that of the torsional spring and the radius link

introduced in the Storrie patent under which the answer and the facts show the defendant's device was licensed and operates.

Storrie as patentee said in his specifications that his invention related to means for absorbing the vibrations and shocks in vehicle springs to such an extent as not to cause annoyance to the rider and strain to the springs of the vehicle, which would tend to cause such springs to crack or otherwise become disabled; that the invention provided a shock absorber embodying an expansible helical spring and supporting means therefor of novel formation, one of such supports being secured to the axle and the other being shackled or otherwise attached to the vehicle spring, the parts being arranged to control the vibrations or shocks not taken up quick enough by the main spring and thereby overcome the objectionable features therein mentioned. And then follow twelve different claims, most of which refer to a radius link pivoted to the support between the torsional spring and the main or laminated spring of the vehicle.

The claim made for the invention is that the real gist of it is in the arrangement of the parts, all of which were old, so that the first vibration and shock would be taken up from the axle by the torsional spring, and then having been divided up into vibrations should be communicated through the torsional spring and the absorber to the leaf spring and "dampened down", as the expression is, by its slower action, so as really to take up and absorb and make to disappear the shocks otherwise directly communicated from the road and the axle to the leaf spring. It is argued that, as these were all old parts, there was nothing new in the patent. We have examined the art with a view to considering that particular point. We think that the theory, that the Thompson patent had and has its real value in the function of the torsional spring directly to take up all the vibrations from the road and axle and quickly to divide them for the dampening effect of the slow moving leaf spring of the car, was a sound one. There have been citations of early patents showing previous attempts of the same kind, but we have not been pointed out to one in which the torsional spring was so arranged as to take all the road vibrations and divide them up before reaching the main car spring, except those which have come after the Thompson original patent. This is true of the Bussing whether German, English and French patents, the Peugeot patent and the Cosset patent. It is true that by taking some of these structures

or devices, notably the Bussing English patent, it may be possible to show how, by turning over on its back the specified device, the torsional spring could be made partly and ineffectively to perform this function, but as described in this or other cited patents there is no suggestion or recommendation of the arrangement in Thompsons'. They—all of them—use the main or leaf spring to take directly all or part of the vibrations from the axle and rely on the torsional spring to soften vibrations after they have passed or are passing through the main spring. The leaf spring in the Warner patent not only takes the greater road shocks directly but the entire spring arrangement is primarily built and put in at the factory while the axle is split into two parts and the device is not made a separate or separable part, a feature which is an important and needed advantage to adapt the absorber to use in a Ford car.

We may properly note, as bearing upon the issue whether there was something substantial in the elaborated claim of the Thompson specifications, that the defendants below called as a witness Mr. Storrie and that upon cross examination he said that the defendant's device was within the Storrie patent and he made it clear that without the torsional spring to divide and neutralize the vibrations from the axle and ground, the good effect of the leaf spring to "dampen out" the vibrations from the road could not be effected.

With respect to the Storrie patent, it is said that the patent in suit is not broad enough to justify an allowance of equivalents which would make the radius link an equivalent to the casing and hanger of the Thompson absorber. It is urged that if it is not an equivalent, it is at least an improvement on the Thompson patent in suit and that this is what Thompson was seeking when the interference proceedings were had. It was upon that theory, that the Storrie patent was an improvement on the Thompson patent, that the Circuit Court of Appeals of the Sixth Circuit in the suit between the Temco Company and the K. W. Ignition Company decided that it could allow only recovery for royalties and not for profits, 283 Fed. 873, 876, 877. It is well established that an improver can not appropriate the basic patent of another and that the improver without a license is an infringer and may be sued as such. *Cochrane* v. *Deener*, 94 U. S. 780, 787; *Cantrell* v. *Wallick*, 117 U. S. 689, 694; *Yancey* v. *Enright*, 230 Fed. 641, 647; *Reed* v. *Hughes Tool Company*, 261 Fed. 192, 194.

We cannot concur with the district judge in this case or with the Circuit Court of Appeals of the Fifth Circuit in the conclusion

that there was no merit in this patent when its usefulness was demonstrated by ten years' use in such large numbers and by such profitable business. We must consider that the Storrie patent was really an appropriation of the original design of the Thompson patent whether it be, as we think it was, a patentable improvement thereon or the mere equivalent of the casing and hanger.

It is argued that an estoppel works as against the Temco Company by the action of one of the Thompsons' and an assignor of its patent because in applying for the second patent in what turned out to be the interference proceeding he had said that the radius link device which was applied for related to an improvement "over" the construction disclosed in the original patent granted to them. If Thompson had said it was an improvement "upon" it would have been satisfactory, but the word "over" is supposed to indicate that he was making an application for a different patent. This is too fine a turn in language. In attempting to distinguish the new invention which he was seeking to have patented, he had said that the claims of the new patent were "obviously different in mechanical construction and functional results". This is said to estop the plaintiff from claiming that the Storrie radius link, which won in the interference proceeding, is only an improvement on the patent in suit as the basic patent upon which the Storrie patent was an improvement. But it was said in the Thompson application for a second patent in the Patent Office that the invention sought was of the general type disclosed possessing certain advantages not possessed by the construction of the prior patent, and it was specifically stated therein that the radius link form was an improvement over a construction disclosed in the first Thompson patent No. 1,072,791.

We have had to depend for knowledge of the contents of the application by Thompson for his second patent on the quotations in the briefs. This record has been so badly prepared and so much has been omitted in the printing that we should really reject the argument by the defendants as to estoppel altogether because the record as printed contains nothing upon which it can be based.

The district court and the Circuit Court of Appeals in this case held that claim No. 3 of the patent in suit was void because inoperative and having no description upon which it could be properly used as a claim. The claim is as follows:

"In automobile construction, wherein coiled springs are used auxiliary to leaf springs for absorbing shock to the road wheels,

the combination of upright stanchions with the axle of the ground wheels, said stanchions being attached to the outer ends of said axle, leaf springs extending above the axle and between the stanchions, and supporting the chassis frame, the said stanchions being adapted to limit the end motion of the leaf springs and thereby prevent side sway of the chassis frame, hangers for the outer ends of said leaf springs, said hangers having a vertical movement and being guided therein by said stanchions, and coiled springs interposed between said leaf spring hangers and said axle of the ground wheels."

The district court in its opinion said:

"For want of any statement as to how the leaf spring and helical spring are to be connected to and guided by the stanchions, I think Claim 3 is incomplete and void."

The Circuit Court of Appeals of the Fifth Circuit said of the claim:

"Appellee [the petitioner] has filed a cross-appeal and insists that the claim which the district court disallowed is valid. That claim is about as vague as it could be made. As pointed out by the district judge it fails to specify the means by which the leaf and helical springs can be connected to and guided by the stanchion. To sustain a claim as general as this is would be to allow a patent for a 'result and not for the mechanism producing it'."

Reading the claim with the specifications and the drawings, which are both clear (*Howe Machine Co.* v. *National Needle Co.*, 134 U. S. 388, 394) its addition to the combination of coiled springs interposed between the leaf spring hangers having vertical movement and guided by stanchions comprehends the link as shown in the drawings or any suitable connection between each leaf spring and its hanger and casing surrounding the coiled spring which is interposed between the leaf spring and the axle and ground wheel. It does not seem to us that the claim is vague; nor do we find nullifying incompleteness in it. *Turrill* v. *Railroad Company*, 1 Wall. 491, 510; *Rubber Company* v. *Goodyear*, 9 Wall. 788, 795; *McClain* v. *Ortmayer*, 141 U. S. 419, 425; Walker on Patents (5th ed.) § 185. Neither did the Court of Appeals of the Sixth Circuit nor did the district courts of that Circuit so find.

Our conclusion requires a reversal of the decree of the Circuit Court of Appeals including its ruling on the cross appeal as to claim No. 3 and a remanding of the case to the district court for further proceedings in accord with this opinion.

Reversed.